

THE ROLE OF MUSIC IN EARLY LITERACY LEARNING:
A KINDERGARTEN CASE STUDY

by

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B.A., University of Northern Colorado, 1980

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AN ABSTRACT OF A DISSERTATION

Submitted in partial fulfillment of the
requirements for the degree

DOCTOR OF PHILOSOPHY

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Abstract

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This qualitative case study was conducted in a combined setting of a kindergarten classroom and music education classroom in a small mid-western community over a period of nine weeks, from February 15 through April 23, 2007. This study, framed in the socio-cultural theory of constructivism (Vygotsky, 1978) and Gardner's Theory of Multiple Intelligence (2004) explored the way a kindergarten teacher and music educator provided literacy learning opportunities for young children. Data were collected through detailed observational fieldnotes, interviews of the kindergarten teacher and music educator, and conversations with children. Data analysis revealed five characteristics that framed the literacy learning environment which included: 1) providing a caring community; 2) use of conversations; 3) connections to prior knowledge and community; 4) collaboration; and 5) consistency.

Pedagogical commonalities were found to include: 1) a gradual release of responsibility; 2) use of metacognition; 3) a sharing of quality children's literature; 4) purposeful oral language development; and 5) use of active engagement in learning, especially the use of gesturing. Data also revealed evidence of support of six components

of early literacy learning: 1) phonemic awareness; 2) phonics; 3) fluency; 4) vocabulary; 5) comprehension; and 6) concepts about print. Data identified that the classroom teacher provided more incidences of instruction coded as phonemic awareness, phonics, and comprehension; with the classroom music educator providing more evidence of coded events for fluency and vocabulary learning. Analysis of combined events identified a balance of instructional methods, experiences, and techniques identifying the critical importance of the elementary music educator's role in supporting early literacy learning of young children and the importance of collaboration in meeting needs of children.

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Dedication

This manuscript is dedicated to my father, Roland W. Schlegel, who has taught me the power of perseverance and demonstrated how important it is to enjoy the journey we are given; and in memory of my mother, Betty J. Schlegel, who believed in me unconditionally and who is greatly missed. Their faith and belief in God has helped me view each day as a new song.

Preface

I entered a retail store on a sunny, summer day. The owner of the shop looked up at me in recognition and exclaimed, “I remember you! You were Laura’s singing kindergarten teacher!” That would be me...the singing kindergarten teacher. I can’t help but wonder why her memory of me, after eight years, was not by name but by the fact that music was a part of my daily instruction. This chance meeting occurred a month after I had received an interesting call my former administrator.

Upon leaving my position teaching primary students, my former principal called me with concerns that the teacher who had taken my place had a large number of children who were struggling to learn letters and sounds. She asked if I would be willing to meet with the teacher to determine if anything had been done differently during the current year. In our meeting we determined we had taught using the same standards and followed the same curriculum. We had utilized the same support staff; however she had not used any music during her instruction. I shared with her some music that I found engaged the children during instruction and provided her with activities to reinforce literacy skills through music.

She willingly gave music a try and began to see results. Was it coincidence- or was it the power of music to engage a child in learning? This research is my journey toward an understanding of the intersection between music and literacy.

CHAPTER 1 - Introduction

The kindergarten children could not read the clock, but they knew what time it was. It was time to start their day. They knew because their teacher started to sing “Today is Monday” while pointing to the calendar. They knew it was time to pick-up and re-organize their room after centers while their teacher began to sing . . . “This is the way we pick up our toys”. . . They knew it was time to go home for the day as the teacher had them hold hands and sing their daily farewell song. Music served to orient them. It anchored them to their sense of routine and order. Music has its unique value- all its own, bringing us pleasure, calming our fears, guiding us in worship. . . However; it may also have the power to be used to support the literacy instruction of children. Music surrounds children with a language of emotion. The first comforting lullaby establishes a connection between sound, rhythm, and meaning. Music can provide a bridge from home to school, linking what children know to what is new. It can establish a joyful link between sound and symbol, helping children along their pathway towards literacy.

High quality literacy instruction is a topic of critical importance as educators seek to meet the needs of all students, assisting them in becoming proficient readers, writers, and speakers. Teachers are constantly in a cycle of professional growth moving between their own learning, enactment, assessment, and reflection (Snow, Griffin, & Burns (2005). It is this cycle that helps educators reflect on what is effective and make changes in practice that benefit students. Research reflecting on what fosters the literacy growth of children must be taken seriously, as literacy allows us to communicate what is known.

Snow et al. (2005) view literacy as a secondary system, dependent on the development of language. As children begin to participate in language events, they begin to demonstrate an understanding of the phonological system of their language. This is the foundation for phonemic understanding that is identified in their early alphabetic reading success. As they enter the school setting, children begin to recognize the power of written language in their world. They often approach literacy learning as a step towards independence and it is often a kindergarten teacher who is the mentor along this journey towards literacy.

Although literacy learning is an ongoing process that begins from the earliest experiences children have from birth, kindergarten is a place where young children may be experiencing the joy of reading for the very first time. As effective teachers read quality literature to children and help children view themselves as readers, a pattern for loving literacy can be fostered. Through the sharing of books, attending to oral language development, and facilitating writing opportunities, teachers set the stage for a life-long relationship between children and books. It is critical that kindergarten teachers establish the conditions to facilitate language and literacy learning. According to Calkins (2001):

Although it is always vital that our teaching begins where the child is and takes the child where he or she can go, this is nowhere more important than in kindergarten, because the most important ingredient for success in school is engagement (p.256).

Children should be encouraged to merge their literacy into their school day by receiving encouragement from teachers that understand and recognize the value of developmentally rich, early literacy experiences. Calkins also states that “the greatest risk is not that a

child will have a knowledge gap, but that the child will learn passivity and disengagement in the face of school and written language” (p.256).

As a practicing kindergarten teacher for eight years, I held high expectations for my young learners. It became clear that in order to teach them, they needed to be joyfully engaged in the learning process. During my teaching career, music was an important part of my instructional day. I gathered the children together in the morning with a song. When assessed, children would often refer back to songs we had learned, to conjure up a fact that seemed out of reach. Knowledge could ride upon a song, making its way into their memory in order to be recalled as needed. Music seemed to calm the upset and engage even the most reluctant learner. As well, music was a part of life beyond the classroom door. Many of the materials and tools used during our instructional day were simply that, school tools. Children didn't go home to manipulate pattern blocks, recite letters, or “make words” in a pocket chart.

Music, on the other hand, was a part of their daily life. From the jingles on their favorite television show, to songs they sang in Sunday school, to their family's favorite radio station, to a lullaby, music was imbedded in their lives. It caught their attention and put them to sleep. I found that if children were struggling with a concept, placing it in a musical context could help them recall it. A child struggling to learn his phone number, once placed to a tune, had it mastered. A child's address that seemed too complicated, if sung to a familiar tune, was hers.

During my many years as a primary teacher my greatest joy was helping unlock a young child's love of literature and as well, their ability to engage in text. My experience had shown me that for some of my students, music appeared to be a key to that process.

Acknowledging the importance of engaging literacy learning, knowing music appeared to be effective in my kindergarten classroom, I became interested in studying how those two concepts could intersect to provide optimal learning that was both academically challenging and yet nurture the joyfulness of childhood. This study of the intersection of music and literacy will hopefully provide insight and engage others in thoughts of how we can continue to make early literacy learning the beginning of a life-long relationship between the reader and the text.

Discussion provided in this chapter is organized to provide the framework for this study. The following sections will be addressed: 1) an overview of the issues; 2) a statement of the problem; 3) the purpose of this research study; 4) the significance of this study; 5) the limitations of this study; and 6) definitions of terms addressed in this study.

Overview of the Issues

In 1997 the United States Congress directed the National Reading Panel to identify the status of effective reading instruction in the United States by conducting an analysis of *research-based* approaches used in meeting the needs of students (Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh, & Shanahan, 2001). *Research-based* instruction was defined in the federal legislation as research that provided scientific evidence about methodologies that had consistently demonstrated instructional success related to student learning. This panel studied more than 100,000 studies, all which needed to provide rigorous data analysis and measurements that were considered valid across observers and evaluators. The research needed to be accepted by a peer-reviewed journal and be approved by an independent panel of experts (Vacca, Vacca, Gove, Burkey, Lenhart, & McKeon, 2006). The research had to address one or more skills in

reading, be generalizable, be effective, and of high quality (Armbruster, Lehr, & Osborn, 2001). This completed study identified five critical components of effective reading instruction: phonemic awareness, phonics, fluency, vocabulary, and comprehension.

Implications of Reading First

With the passing of the No Child Left Behind Act of 2001 (PL 107-110), many pedagogical practices for literacy learning have been re-examined to align themselves with the results of the National Reading Panel report. The No Child Left Behind Act (2001) was accompanied by the largest increase in federal aid for education in history. This funding was based on the findings of the National Reading Panel report (2000) and was designed to provide more children with effective reading instruction to assure early reading success. This initiative, referred to as Reading First, mandates systematic and explicit instruction of the key components identified by the National Reading Panel report (phonemic awareness, phonics, fluency, vocabulary, and comprehension).

Summarizing what researchers have determined about how teachers successfully engage children in reading instruction, the five key components identified in Reading First are expanded below through a description of each component and its impact on effective literacy learning (Armbruster, Lehr, & Osborn, 2001):

- Phonemic awareness is important because it improves children's ability to read individual words, leading to greater comprehension. This instruction is most effective when letters of the alphabet are integrated with phoneme manipulation and when only one or two types of manipulation are engaged in at one time.

- Phonics instruction is important because it solidifies the connection between spoken sounds and written letters. Effective phonics programs provide children with opportunities to apply what they are learning about sounds and letters in authentic reading and writing experiences.
- Fluency is important because reading text accurately and quickly allows children to focus on the meaning of the text. Fluency can be effectively developed through modeling of fluent reading and providing opportunities for children to participate in repeated oral reading of texts.
- Vocabulary instruction is important because it allows children to make sense out of the words they encounter. Vocabulary can be effectively developed indirectly when children engage in rich oral language, listen to stories being read, and read independently. It is also developed directly when teachers explicitly teach strategies for unlocking the meaning of words as well as teaching individual words.
- Comprehension is important because it is the basic reason for reading. Comprehension instruction is effective when it helps readers use strategies purposefully. This instruction can occur in the context of explicit instruction or through cooperative learning experiences.

Approximately 40% of the entire U.S. Department of Education's budget has been sent to states and school districts according to a specified formula that reflects the number of school age children and families that live in poverty. This legislation utilizes federal resources to support the local and state efforts to meet the need of all children, especially those most at risk, placing an emphasis on reading instruction (Trahan, 2002).

Higher accountability and high stakes testing has caused reflection regarding how instructional time is spent in classrooms. Curriculum designers have studied the implications of the National Reading Panel report and responded with academically based programs to meet the demands of the high stakes testing environment. With more emphasis placed on testing, teachers find themselves struggling with meeting the demands of rigorous testing and maintaining a sense of what is developmentally appropriate practice. As schools vie for Reading First grants, provided by the government to meet the needs of schools working to improve their outcomes in literacy, reading instruction has been given priority within the school day, but often at the expense of narrowing the curriculum.

The Center on Education and Policy (CEP) released a recent report highlighting the benefits seen through the enactment of the No Child Left Behind legislation (Rentner et al., 2006). This information is a report based on the most comprehensive national study looking at survey information from all fifty states, encompassing 299 school districts in 38 geographically diverse districts. This report states that test scores are rising in the majority of the states and academic progress is being seen when looking at the data regarding rising scores within each subgroup. However, the survey reported that those responding to the survey felt that escalating pressure on teachers has elevated stress levels and is negatively impacting staff morale in the reporting schools. Also shared was that 22% of those responding to the survey reported that they had reduced the time that students spent in art and music, in order to provide additional time for reading instruction.

The Emergence of Literacy

It is critically important that educators acknowledge the developing literacy behaviors of young children. The term *emergent literacy* refers to a child's literacy development prior to formal literacy instruction (Teal & Sulzby, 1986). Emergent literacy is supportive of the social-constructivist view of learning, recognizing the experiences that children have as toddlers and preschoolers are legitimate and important in providing a foundation for literacy. It involves a continuum of behaviors that include both oral and written language, occurring in situational contexts as well as connected discourse (Teale & Sulzby, 1986). Children engage in experiences that allow them to test out their understanding of literacy, noting the responses from others, to continue in their journey towards becoming literate individuals. This understanding evolves over the course of years and does not have a set period of initiation or completion.

During their early years, children are immersed in language in authentic and meaningful contexts. It is during this time they begin to use multiple systems to communicate their desires, thoughts, and ideas. These systems include not only oral language and written language, but also art, music, math, gesture, play, dance, movement, and other child directed activities (Martens, 1996). Oral language provides the foundation for future literacy understanding. Oral language includes both speaking and listening. Children begin to recognize that language is made up of words and words are powerful in providing for needs to be met. In the realm of emergent listening behaviors, young children recognize that words are made up of sounds and carry a message that can be thought about. They develop skills related to listening and retelling of stories. They willingly "chime" in with the reading of text and talk about what they have heard.

Emergent reading behaviors are evident when children share their understanding that words have meaning and illustrations convey meaning as well. Through observation and their own attempts with print, children construct their conceptual understanding about the structure and function of print (Soderman, Gregory, & McCarty, 2005). Children may “pretend” read, pointing at text as they retell the story in their own words. Children at the emergent stage also begin to demonstrate an understanding of concepts about print, such as the knowledge that books are read from front to back, print is organized from left to right and top to bottom, words are the things that are read, and letters stand for the sounds we say. It is in this conceptual development that children begin to make the connection between oral language and written text (Soderman, Gregory, & McCarty, 2005).

Children often develop an understanding of text through the experience of being read to by an adult. Reading aloud to children has been identified as a vital experience in literacy development both in school and at home (Morrow & Gambrell, 2000). These early experiences allow children to develop an understanding about features of written language and help them to gather knowledge about how to approach a text. During a read-aloud experience, children identify that written language does differ from oral language, that sounds represent the printed words on the page, and that print is meaningful (Morrow & Gambrell, 2000).

Children who demonstrate emergent writing behavior recognize that anything that is said can be written down and re-read in the future, noting that print can be organized in specific ways. This exploration of the symbol system of writing moves children along the continuum from communicating through drawing to writing. Children’s writing is

often accompanied with their explanation of their ideas, leading them once again to the valuable development of oral language behaviors (Gentry, J., & Gillet, J., 1993).

To provide an optimum environment to foster emergent literacy development, educators provide opportunities for children to safely explore the world of print and language. Christie, Enz, and Vulelich (2007) suggest the following classroom experiences to foster emergent literacy behaviors in children:

1. Print-rich classroom settings that include quality children's literature, displayed conventional print, functional print, environmental print in learning centers and ample children's writing.
2. Storybook sharing with students as active participants in the experience.
3. Shared reading with instruction embedded regarding concepts of print and elements of story.
4. Opportunities to learn thematically with language activities integrated into all areas of the curriculum.
5. Opportunities for children to participate in meaningful reading and writing throughout their day/ evenings.

During the early years, children are engaged in critical cognitive work to provide the foundations for later literacy. Although children move through various stages in their early literacy development, a nurturing, knowledgeable educator can present opportunities to facilitate this learning by providing developmentally appropriate experiences designed to meet the needs of all learners.

Establishing Developmentally Appropriate Practice

Recognizing the critical importance of quality literacy experiences, teachers must also continue to reflect on what instructional experiences are most developmentally appropriate for children as they engage in emergent literacy practices. Guidelines provided by the National Association for the Education of Young Children (birth - 8) identify twelve principles of child development and learning that should be used as educators design instruction for young learners (Bredekamp & Copple, 1997):

1. *There are four closely related domains of child development that are dynamic and interactive. Those domains include the child's cognitive, physical, emotional, and social development.* In planning instructional experiences teachers should help each child make meaningful connections across all these domains in order to provide optimal learning experiences for the child.
2. *The development of a child occurs in a fairly organized sequence with knowledge built upon previous understanding.* Teachers must have knowledge of the predictable sequences of child development to serve as a general guide in planning and preparation of the learning environment. This will allow teachers to plan realistic goals for their learners and establish appropriate instructional experiences for children.
3. *Child development does vary between children, and domains may vary within a specific child as well.* All children have their own unique strengths, interests, needs, abilities and talents. This should not just be acknowledged by educators, but valued. Children should not just be

considered as members of an age group, but as individuals with their own unique personality, learning style, experiential learning background, and temperament.

4. *Early experiences can have both cumulative and delayed effects on the development of individual children, and that periods exist for optimal learning to occur.* The experiences a child has beginning at birth will be reflected in his educational attitudes, beliefs and abilities.
5. *As learning continues it becomes more complex, organized, and internalized by the child.* Repeated exposure to information and opportunities for practice allow a child to build her knowledge base moving from more concrete understanding to more abstract understanding.
6. *A child's development and their learning are influenced by both cultural and social contexts.* Children reflect the belief systems and values of those who have been instrumental in their lives.
7. *Children are active agents in their learning and they draw on both their social and physical experiences to build their own understanding of the world.* To learn, a child should be actively engaged in the process of learning - not a passive recipient of knowledge.
8. *Learning and development result from interaction between the environment and biological maturation of the child.* As children mature, they are able to attend for longer periods of time and attend to more abstract concepts.

9. *The use of play is essential as a vehicle for cognitive, social, and emotional development of children.* The work of children is play. It is an avenue for life- long skill development. Skills such as negotiation, problem solving, communication, and compromise can be learned through play.
10. *When children are presented with opportunities to practice newly acquired skills their development advances beyond previous levels.* It is important that teachers recognize the importance of providing activities that children are able to manipulate successfully with appropriate scaffolding, because if children are met with repeated failure, they will simply stop trying.
11. *Allowing children to demonstrate what they know in different ways is critical to developmentally appropriate practice.* This is reflected in the work of Gardner (2004) recognizing that children have stronger or preferred modes of learning. This principle implies that teachers should not just provide children with opportunities to use their preferred mode of learning to capitalize on their strengths, but to provide opportunities to help children strengthen modalities that may not be as well developed.
12. *Children develop and learn best when they feel they are valued and safe.* Children are more apt to learn when their physical and psychological needs are met.

Integrating experiences that are important to children with literacy learning is essential to a successful early literacy program. Developmentally appropriate practice

means making academic content meaningful for children (Morrow, 2004). Reading is a very complex process, and to meet the needs of children teachers must draw upon a variety of instructional approaches. Morrow (2004) comments that thematic instruction integrates content with literacy and can be especially effective. Developmentally appropriate practice allows children to be playful-- "...to interact with teachers and peers as they sing, listen to stories, and engage in creative art and play. As they do so, they will learn vocabulary, acquire information, and learn concepts about print and writing" (p. 89). Authentic experiences can frame literacy events making learning meaningful.

Kindergartners can learn to weave reading into play dates, choice time and recess. How important it is that kindergarten teachers who understand and value developmentally rich, early childhood classrooms become the spokespeople and mentor teachers and curriculum leaders for the new push toward literacy in the primary grades. We need to help the public form a new and more rigorous and more joyful image of what rich literacy looks, sounds, and feels like in the earliest grades (Calkins, 2001, p. 295).

It is a fine art of balancing for educators to determine a curriculum that is challenging, yet nurturing; realistic, yet creative.

Key Factors in Early Literacy Engagement

There are several key factors that must be included in an early literacy curriculum that is grounded in evidence-based research. It is here that an intersection between music and literacy can be found. Those components include: 1) oral language development which includes vocabulary and listening; 2) an understanding of the alphabetic code, that includes phonological / phonemic awareness and knowledge of the

alphabet; and 3) knowledge and understanding about print and its use (Strickland & Riley-Ayers, 2006.).

The use of oral language is a normal, genetically hardwired process, yet reading is not (Sousa, 2005). The oral language of a child provides a foundation for reading as the child begins to accumulate a listening and speaking vocabulary. Sousa (2005) states that about half of children transition between oral and written language with not much difficulty, while out of the remaining half, 20 – 30% struggle greatly with the task. Singing is an oral language activity. Music is considered by some to be a language system - a language with powerful appeal (Kolb, 1996). Music is known to exist in every culture as a means for communication. When engaged in singing, students can develop both receptive and expressive language skills. As repeated reading of text builds fluency in reading, repetition, or rehearsal, as it is usually called in music, builds oral language fluency as well.

Children who learn to read English must recognize and utilize the alphabet code. The foundation for this understanding is phonemic awareness. Children who have a strong understanding of phonemic awareness recognize that running speech is made of individual sounds, and those sounds can be manipulated. Yopp (1992) states that it is evident that children attend to these smallest units of speech when they utilize invented spelling. Children using invented spelling have discovered that to communicate with words, sounds are written down on paper. There is a great deal of supportive evidence identifying the value of phonemic awareness and the inquiry now can turn to the nature of that relationship. Most researchers do agree that learning to read and phonemic awareness are reciprocal in nature. Yopp (1992) contends that phonemic awareness both

supports reading acquisition and is a *consequence* of reading instruction. Attending to individual sounds in our language can be accomplished through the context of music. Children participating in songs that focus on rhymes and word play may increase their understanding of how sounds can be manipulated to make new words.

Children becoming readers must establish a basic understanding of concepts about print. They must acquire an understanding of how letters, text, and books work. They must also establish a working vocabulary that will allow them to communicate that understanding in an educational setting. Both music and the reading of text are based on similar concepts of print (Butzlaff, 2000). Both reading music and reading texts rely on a symbol system that is written down to convey meaning. Both tasks are socially constructed for the purpose of communicating thoughts and emotions. The basic unit of written English is the letter; in music the basic unit is the note. When placed together letters form words: notes can form chords. Words are placed together in a meaningful order to make a sentence. Notes are placed in a meaningful order to form a measure, or even a phrase. Both the reading of text and the reading of music occur from left to right, utilizing a return sweep. Pages are read from left to right and top to bottom. Punctuation is used to convey the meaning of the author, while dynamics are used in the context of music to convey the meaning of the composer. It is clear that reading music and text can both complement one another in attending to these three components of engaging literacy instruction. These components can be identified as the foundation for a child's early reading success. In the educational setting it is imperative that a balance is found between celebrating music for its own sake, acknowledging how music enriches our lives

aesthetically, and recognizing how it provides a developmentally appropriate venue on which to build literacy skills.

Music can serve as a natural bridge to literacy by connecting a child's auditory system, kinesthetic systems, emotive systems, as well as through an exploration of the child's reactions, feelings and attitudes towards texts (lyrics) placed within music.

Through music, children experience the wholeness of language.

Children, especially, are captivated by the music in their environment. They respond freely to a variety of tempos, from drum beating to gentle swaying, and their undivided attention commits to memory verse after verse of popular songs and jingles. The enthusiasm displayed and the eagerness to sing and move with the beat reflect a child's natural propensity toward music (Harp, 1988, p. 76).

As I explored the most current research, I came to the realization that what had worked for me had strong theoretical support and pedagogical implications. When I sang with children, they were actively engaged with language. The children were working together as a community of learners to communicate their thoughts and ideas. They were immersed in patterns and rhythms. They were using their voices, hands, and minds to build their understanding of the content placed before them. The children were joyfully embracing their learning, using the strengths they had as learners to internalize new information. As I provided developmentally appropriate opportunities for them on which to construct their conceptual and linguistic knowledge, they were falling in love with literacy.

Educators face a great challenge of providing effective instruction that meets the needs of all students with limited amounts of time and resources. All children deserve to

receive quality instruction by teachers that recognize how children access literacy. Phonological awareness, especially phonemic awareness, is a key component to the young child's literacy foundation. Brain research has supported this understanding in that both children who struggle and don't struggle with reading present different neural patterns based on phonological tasks, but studies have also indicated that effective instruction can actually change neural patterns allowing for documentation of learning that occurs during effective phonological instruction. Music is a venue to integrate phonemic awareness into the instructional day. Therefore, a case study regarding the way teachers use music within the context of literacy learning may provide insight into effective literacy teaching.

Statement of the Problem

Kindergarten teachers today are struggling with increasingly academic-based curriculum resulting from the No Child Left Behind legislation. There is a need to explore opportunities to strengthen the components of reading instruction which include phonemic awareness, phonics, fluency, vocabulary, comprehension, and motivation. It is imperative that teachers are aware of all opportunities to provide students with developmentally appropriate, effective learning experiences which encourage strong early literacy skills. Currently, there is a trend to take away time spent in instruction in the arts to provide additional time in the instructional day for literacy and math instruction (Rentner et al., 2006). However, it must be noted that "learning to read and write is a complex and multifaceted process that requires a wide variety of instructional practices" (Coppole, Bredekamp, & Neuman, 2000, p. 14). Engaging children in music to

support literacy learning may provide an avenue of creative instruction. The effective use of music within the context of literacy learning in kindergarten must be further explored.

Purpose of the Study

The purpose of the proposed study is to discover and describe the way music is being used in a kindergarten classroom to encourage and support early literacy learning. This qualitative research study will be conducted as a case study providing rich description of practices and techniques used in a kindergarten classroom to engage students in literacy experiences. This study seeks to provide a holistic exploration of the ways in which a teacher may choose to use music to engage children in literacy learning. This study was conducted within a kindergarten classroom, as that is the context in which young children are engaged in their work of learning. Literacy learning is socially constructed so it is imperative that it be studied within a naturalistic setting that allows for children to interact with one another and their teacher. As Fosnot (2005) states, “We cannot understand an individual’s cognitive structure without observing it interacting in a context, within a culture” (p. 28). The culture of this study is the culture of the kindergarten classroom.

Many educators do not have an understanding about how brain research can inform teachers regarding literacy acquisition. They also may not have an understanding that would help them articulate the value of music to those individuals that make policy or make educational decisions within the educational setting. Often teachers do not have a music background to feel confident in incorporating music in the school day, and they are not provided with this information in the training they receive. Due to the current demands of time and resources, especially since the implementation of No Child Left

Behind legislation, teachers struggle to identify instructional priorities. The music educator may be seen as a critical component of the literacy team providing instruction for young children. Balkin (1999) states:

As educators, no matter what our specialty, we need to recognize that nothing in the curriculum is more important than the child's early education than those experiences which reinforce the learning of literacy. . . it is an historical premise that a well-crafted song is the most powerful, personal, pleasurable, and above all permanent tool in our pedagogical arsenal to establish an educational concept. . . The classroom music teacher might ask: 'is it my job to teach literacy as well as music? Is this what I was trained to do?' my answers are: 'You have been trained to teach children. Your specialty is music. You use that specialty and your talent to teach whatever (along with music) fundamental knowledge that children must possess in order to function successfully in school and in life. You are first and foremost a teacher, one who holds the magic of music in our hands, head, and heart. This magic can move children in so many varied ways that will energize them to learn almost anything (¶ 2, 3).

Upon leaving the elementary classroom, I had a clear sense of what had worked for me as a classroom teacher. The use of music to engage children in learning seemed to be an instructional essential. What I wasn't sure of was *how* it had worked. My motivation for this area of research is driven by my desire to expand my knowledge and understanding regarding the connections between literacy development and music. My past experiences in working with young children, partnered with my reading of current literature, has continued my desire to explore the value of infusing literacy learning with

music as a way to engage young children. This topic is deserving of the attention of researchers and practitioners in education.

Research Questions

Several research questions provide the framework for this case study. The focus of this study is to explore how music might be integrated in a kindergarten classroom to engage and motivate children in early literacy learning. To examine this topic, four guiding questions have been developed:

1. What types of instructional methods, experiences, and techniques occur in a kindergarten classroom to engage students in literacy learning?
2. How is music integrated within the context of literacy instruction in the kindergarten classroom?
3. How do a classroom teacher and a music educator view connections between music and literacy practices of young children?
4. How do kindergarten children perceive connections between music and literacy experiences in the classroom?

Significance of the Study

Teachers often rely on their own observations and intuition to determine what works and does not work. However, psychological research has determined that human intuition regarding what works in learning can be fallible resulting in practice based on unreliable information (Reyna, 2004). Learning outcomes are often subtle and difficult to track. Although professional intuition about what instructional methods are effective in the classroom, based on many years of experience, is often a source of decision making,

those intuitions could perhaps be wrong. Research conducted within the context of the classroom provides the opportunity to observe practice. Research also allows for observations to be made regarding connections between specific practices, attitudes, and techniques.

This study provides a window to observe a kindergarten teacher engaged in using music in the context of literacy instruction. Previous studies have often examined special education professionals, reading specialists, or researchers to provide literacy instructional interventions to determine the effectiveness of methods, experiences, or techniques. This study focuses on how a kindergarten classroom teacher and music educator work in tandem to provide musically integrated instruction in the context of early literacy learning. Therein lies the importance of this study.

As classroom educators have been faced with changes and challenges that have accompanied the No Child Left Behind Act, music educators have also been faced with challenges as the focus on raising test scores in reading and mathematics have put constraints on budgets, personnel, and the resource of time provided to the teaching of the arts (Hansen, Bernstorf, & Stuber, 2005). At the conclusion of a study on the benefits of music sessions on early literacy skills, Register (2001) suggests that tracking the teacher's use and reinforcement of music experiences in the regular daily classroom schedule may be helpful in examining the ways collaboration can exist between all educators and specialists to strengthen the learning of children. This suggestion is supported by research that identifies the importance of adults in supporting the language growth and development of children (Strickland & Morrow, 1989). The potential exists to blend resources to provide quality reading instruction that incorporates the use of

music, which would allow children to be joyfully engaged in the process of sharing their ideas, beliefs, and talents.

By exploring the use of music in a kindergarten classroom, additional ways to engage students in effective literacy learning may emerge, thus enabling teachers to integrate the teaching of music and literacy to provide an optimal learning situation for young literacy learners.

Limitations of the Study

Qualitative research allows the researcher to enter the world that is to be studied. In the case of this study, that world is a kindergarten classroom. A kindergarten classroom is dynamic and interactive in nature and that context brings with it certain limitations. This descriptive case study will attempt to describe the characteristics, relationships, and reactions of literacy learning within the context of one kindergarten classroom. Descriptive studies do not allow conclusions to be drawn about cause and effect (Reyna, 2004). A researcher would select a case study approach because one has the desire to understand the particular in depth, rather than what is generally true of many (Merriam, 1998). Limitations that may pertain to this study include: 1) The impact of the researcher on teacher practice; 2) small sample size; and 3) researcher bias.

The teachers who will be involved with this study will understand, to a certain extent, that the researcher is exploring the intersection between music and literacy. It must be considered that they may change their methods, experiences, or techniques from what is generally done within their classrooms to address the study. The researcher has assured the kindergarten teacher, as well as the music educator, that what they are currently doing within the educational setting is what the researcher wants to observe.

This single case design may appear to lack strength in size of research sample; however, this setting has been purposefully selected to provide rich opportunities for data collection, due to the daily music instruction as well as full-day kindergarten instruction. It will be the role of future researchers to determine if similar learning environments may provide similar findings. The researcher in this study admits to a belief in the effective use of music as an instructional tool. The past experience of the researcher, however, can be viewed as strength when considering what Strauss and Corbin (1990) refer to as “theoretical sensitivity” of the researcher.

Theoretical sensitivity refers to a personal quality of the researcher. It indicates an awareness of the subtleties of meaning of data. . . [It] refers to the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn't (p. 42).

To protect against researcher bias during data analysis, the researcher will systematically collect multiple forms of data and establish trustworthiness through providing rich description of what is observed, prolonged engagement in the field, peer reviews/debriefing, and member checks.

Definition of Terms

The following terms are defined as they are related in the context of this dissertation proposal:

- 1. comprehension:** Understanding what is read or heard. Comprehension should be purposeful and actively involve the reader/ listener (Armbruster, Lehr, & Osborn, 2001, p. 57).

2. **concepts about print:** basic understanding about the way print works, including the direction of print, spacing, punctuation, letters, and words. (Tompkins, 2006, p. 509).
3. **early literacy learning:** Explorations in reading , writing, listening, speaking, viewing, and visually representing.
4. **emergent literacy:** activities and behaviors related to written language undertaken by very young children who are dependent on the cooperation of others and/ or on creative play (Burns, Griffin, & Snow, 1999).
5. **literacy:** The ability of an individual to read, write, listen, speak, view, or visually represent their thoughts and ideas through communicating, understanding and interpreting both print and non-print media (Hancock, 2007, p. 3).
6. **phoneme:** The smallest units that make up spoken language (Ehri & Nunes, 2002, p. 110).
7. **phonemic awareness:** The ability to focus on and manipulate phonemes in spoken words. This may be established through tasks such as phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme segmentation, and phoneme deletion. (Ehri & Nunes, 2002, p. 111).
8. **phonics:** The conscious, concentrated study of sound-symbol relationships for the purpose of learning to read and spell (Savage, 2007, p. 189).
9. **phonological awareness:** Awareness at all levels of the speech/sound system, including stress patterns, onset-rime units, syllables, and

phonemes. It includes both phonemic awareness and a systematic approach to phonics instruction systems (Wolfe & Nevills, 2004, p. 158).

10. vocabulary: The words one must know to communicate effectively. Oral vocabulary refers to the words used in speaking or recognize when listening. Written vocabulary refers to the words recognized during reading (Arbruster, Lehr, & Osborn, 2001, p. 51.)

11. transitioning: The movement of students between experiences occurring within the classroom, or the movement of students between the classroom and other locations within the school environment.

Organization of the Study

Chapter One introduces this proposed research which will study the role of music in the literacy learning of kindergarten children. It includes an overview of the critical issues, statement of the problem, purpose of the study, research questions posed, description of the study, limitations of the study, definitions of terms and the organization of the study. Chapter Two provides the theoretical perspectives that will serve as a framework for this study- discussing constructivist perspectives and the theory of multiple intelligences. Chapter Two will also provide a review of relevant literature related to phonemic and phonological awareness, relevant brain research that informs reading instruction and research that has provided a link between music and literacy learning. Chapter Three describes the proposed research methodology, including a description of the research design, data collection, and data analysis.

Chapter Four provides the results of the study beginning with a thorough description of the literacy environment found in the school. A description of the integration of music and literacy learning will provide the context for an examination of pedagogical practices related to the teaching of phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. Chapter Five examines the findings of the study and conclusions that were drawn. Implications for classroom teachers, music educators, administrators, and policymakers are discussed and recommendations for future research are offered.

CHAPTER 2 - Review of Literature

Theoretical Perspectives

As educators seek to meet the needs of all learners, practices are anchored within theory to provide a framework for why we do, what we do. This is essential to informed decision making and provides educators with a framework for articulating what they believe about learning as well as teaching. Reviews of early theorists agree “that children learn from doing and that education should involve real-life material and experiences and should encourage experimentation and independent thinking” (Mooney, 2000, p.4). John Dewey’s work on the philosophy of educating children provides a foundation for valuing education that is child-centered, active, and interactive while involving the social world of the child and the child’s community (Mooney, 2000).

Constructivist Learning Perspectives

Learning is dynamic. It is ever-evolving as we experience life. The understanding that children construct knowledge from interaction with their environment, giving meaning to people, places, and their place in the world, is the basic premise of the constructivist perspective (Mooney, 2000). Piaget (1977) believed that children learn from a curiosity that is not satisfied; and it is that drive that propels their learning. He also believed that children’s intellectual growth is affected by their interaction with their environment. Piaget provided the foundation for experience-based learning when he encouraged teachers to plan experiences for children that immersed them in an

environment that would allow them to experiment, manipulate their environment, and question (Abrahams, 2005). Often referred to as a developmental constructivist, Piaget saw development leading the learning. He believed that cognition was influenced by a child's maturation and experiences as he passed through a series of stages.

A central theme to Piaget's theory was that learners construct their own meaning. He asserted that for a child to know and build knowledge of the world around him, the child must act on objects. He recognized the value of play as an avenue of learning and the current understanding of active engagement can be anchored within this theory of constructivist thought. From this perspective, learning is a process that allows students to construct meaning in response to novel ideas and experiences they encounter in school. Throughout this process, the learner uses prior knowledge which they have stored in memory as structures for learning. These structures have been identified by various cognitive scientists as knowledge frameworks, schemata, mental models, and personal theories. The purpose of such structures is to make sense of the new input (Glaserfeld, 1995).

While constructivist in nature, Russian psychologist Lev Vygotsky's theoretical work recognized that social and cognitive development are interactive in nature (Mooney, 2000). Like Piaget, Vygotsky viewed knowledge as being constructed from personal experience; but he believed that one's personal and social experience could not be held apart. In his theory of socio-cultural constructivism, Vygotsky (1978) emphasized that the experiences a person has allows for the way one internalizes information. Vygotsky's perspective was that children and people, in general, attend to the environment that surrounds them and become motivated to learn what they feel is important to their

functioning in the world. Through guidance provided by others they then incorporate these skills into their own behavior patterns; therefore, the social context for learning is critical for human intellectual growth (Soderman et al., 2005). Vygotsky believed that a child's world is shaped by his/her family, friends, socioeconomic status, culture, and education and this was his/her understanding of life. It was his belief that children learned from others and that language was the vehicle for that learning.

Vygotsky's understanding was that the interaction of children with teachers and peers facilitated their learning (Mooney, 2000). This assistance given by an adult or knowledgeable peer is referred to as scaffolding. This term was identified by Wood and Middleton (1975) and referred to joint problem solving between a child and a peer or an adult in order to achieve a common goal. In order to scaffold students well, teachers must be keen observers. Rather than work through sequential levels of development as Piaget presented, Vygotsky contended that students should be challenged by proper scaffolding.

Vygotsky (1978) believed that learning occurred along a continuum between the ability of a child to solve a problem independently and the ability of a child to succeed with the assistance of a capable peer or adult. This was called the zone of proximal development and gave direction to effective scaffolding. It was Vygotsky's theoretical understanding that children can achieve more when challenged to move beyond what is known to what is new.

Fosnot (2005) states that "constructivism is a theory about learning, not a description of teaching" (p. 33). There is not a set of instructional methods or techniques that will suffice as a constructivist approach, but rather some guiding principles of

learning based in the constructivist framework of learning theory. One of those principles is that “learning is not the result of development; learning *is* development. It requires invention and self-organization on the part of the learner” (Fosnot, 2005, p. 33). It is within the interactions that students have with the teacher and with each other that allow them to affirm their understanding or bring forth questions they have. Fosnot also notes that propelling a child toward learning is what she calls “reflective abstraction.” Allowing children to work with one another to challenge their understanding and dialogue within a community of learners causes them to bring understanding to the world around them. It is through the struggle to make sense of their world that learning occurs.

Cambourne (2002) provides a link between constructivist theory and instructional practice. He states that teaching activities and strategies in the classroom are a combination of four dimensions of teaching and learning. These dimensions involve extremes in perspectives: Explicit/Implicit, Systematic/Unsystematic, Mindful/Mindless, and Contextualized/ Decontextualized. This framework, although dealing with extremes, provides an understanding for the constructivist reading classroom. In his research, Cambourne found that constructivist classrooms were characterized as being explicit, systematic, mindful, and contextualized.

Explicit teaching allows students to become deliberately aware of those invisible processes that need to occur for children to be effective readers. Teachers can make explicit what they notice in the text; their likes and dislikes, sharing their excitement regarding a specific piece of literature. Teachers can make explicit their purposes for literacy activities as well as the processes they go through during the process of learning to read and write. Students are provided with an opportunity to build their understanding

through discovering what the reading process involves. This establishes a culture for learning that values the person as well as the process of learning.

Systematic instruction is grounded in sound rational planning and is evident in constructivist classrooms (Cambourne, 2002). Teachers that provide literacy experiences in these classrooms have thoughtfully considered the needs of the students and have designed effective instruction to meet the needs of the learners. Teachers who provide systematic instruction can articulate why they do what they do in the context of their instruction. Mindful learning which was referred to as a metacognitive awareness- being aware of what is going on and the context for the learning- was also more evident in constructivist classrooms. This led to contextualized learning. Contextualized learning can be defined as learning that makes sense to the learner. “The degree to which learners can make sense of any learning situation is a function of the degree to which they can place it in a context that helps them make connections” (Cambourne, 2002, p. 35).

Wadsworth (1996) draws a connection between Piaget and how children learn to read and write. Learning to read should not be separated from learning to write and spell, as it is a means for communication. Children must be given the opportunity to construct awareness that letters can be representative of meaning. Learning to read is a code-breaking process which calls student to assimilate and accommodate their experiences with written language as an active participant; errors are to be seen as an important part of the process. Children best construct their understanding of reading while interacting with others. Reading should be viewed as a meaningful activity for the child; this meaning is only present when he has schemata present to serve as an anchor for new knowledge. Learning to read is a process that requires adaptation and motivation. Being

engaged and motivated may be the most important determining factor for readiness in reading (Wadsworth, 1996).

While authentic literature can serve to contextualize learning, so can the use of music. Music is an authentic means of communication for many people, including those from every culture; a language of emotion. As young students seek to construct their understanding of literacy, the context of music appears to have much to offer in the area of contextualized structure for learning.

Theory of Multiple Intelligences

The Theory of Multiple Intelligences (Gardner, 1983, 2004) proposes that it is more accurate to identify the cognitive ability of an individual as a collection of different, but integrated, cognitive aptitudes, rather than one measure of general intelligence. These various intelligences allow for learning to be gleaned in different ways, as well as expressed in various forms. Moran (2006) speaks of a profile of intelligences that provides a combination of strengths and weaknesses among the various intelligences that Gardner (1983, 2004) suggests in his work.

The forms of multiple intelligences include linguistic intelligence, musical intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, naturalistic intelligence and two forms of personal intelligence, interpersonal and intrapersonal. These forms of intelligences work to provide cognitive support to the learner in various ways.

- *Linguistic intelligence* refers to the ability of learner to learn through the use of spoken and written communication.

- *Musical intelligence* refers to the ability of a learner to recognize and comprehend concepts such as rhythm, pitch, melody, and harmony.
- *Logical-mathematical intelligence* is the ability to comprehend through the use of numerical symbols and logic.
- *Spatial intelligence* refers to one's ability to comprehend through the use of orientation and manipulation of three-dimensional objects.
- *Bodily-kinesthetic intelligence* is defined as the ability to coordinate physical movement, and *naturalistic intelligence* is the ability to categorize and distinguish objects in the natural world.
- *Naturalistic intelligence* involves the ability to make consequential distinctions in nature (Gardner, 2005).
- *Interpersonal intelligence* is the ability people have to interact well with other people.
- *Intrapersonal intelligence* is the ability of a person to recognize and understand one's own thoughts, preferences, interests and feelings (Gardner, 1983, 2004).

In his work, Gardner (1983, 2004) notes that society has studied knowledge in these domains and identifies the university setting and the groupings of “colleges” to make his point understood. He states that “the culturally constructed spheres of knowledge must bear some kind of relation to human brains and minds, and the ways that those brains and minds grow and develop in different cultural settings” (p. xx). Gardner also states that the Theory of Multiple Intelligences is supported by biological evidence. There has been powerful evidence from neurophysiologists noting the existence of

different mental faculties related to brain structures. Gardner has recognized in more recent writings that the identification of additional intelligences shall remain a dynamic process and that as more research is conducted additional intelligences, such as spiritual intelligence, may be identified (Gardner, 2005).

Moran, Kornhaber, and Gardner (2006) make an analogy between multiple intelligences and Lego™ building blocks. Using only one kind of block with which to build, one is very limited in what can be accomplished. These intelligences work in concert with one another to provide scholastic aptitude or aid in accomplishments. At times these various intelligences may interfere, compensate, or enhance one another. For example, a child who has strong musical intelligence, yet does not have strength in interpersonal intelligence, may not have the aptitude to perform for others, and yet may prosper as a song writer. As well, these intelligences may compensate for one another. If children are unable to linguistically represent their understanding through the writing of a book report or an oral presentation, they may be able to demonstrate their understanding by the building of a model or performance of a dance. In the field of education it is also seen that one intelligence may enhance other intelligences.

For example, strong musical intelligence may serve as a catalyst for the writing of a poem. Or strong spatial intelligence may assist in a child's understanding of a mathematical concept. Teachers can help students capitalize on their intellectual resources if they recognize the value of using strength of one intelligence to serve as a catalyst in the development of another (Moran et al., 2006). As this relates to reading instruction, children who are struggling in reading may be in need of different forms of help, related to their needs. If a child is struggling with comprehension of the story,

perhaps he is facing a challenge with linguistic intelligence. A child who doesn't understand the relationships between the characters and how that is impacting the story may be facing a challenge in utilizing interpersonal intelligence. A child who is struggling to make sense of the letters, their shapes, and basic decoding skills, may be struggling with spatial intelligence in recognizing the relationship of the symbols for literacy as seen on the page. What Moran et al. (2006) make clear in their work, is that merely providing more practice in reading may not meet the needs of children, simply because they are struggling with reading a piece of text.

Multiple Intelligence theory supports the collaboration of students in the accomplishment of a task, drawing upon the strengths of each student. Students with similar profiles are able to extend their understanding. Partnering children with complementary profiles may compensate for their needs in building understanding. One student who is able to provide a spatial model of a concept may then have that model explained to others by a student with strong linguistic intelligence. In research provided through Project Zero (Gardner, Feldman, & Krechevsky, 1998), fifteen activities were provided for children to explore while being assessed with behavioral rubrics. Teachers were able to watch children to examine what intelligences were evident, as well as those that did not surface, to allow insight into the best way to approach learning for children. As one looks at the pedagogical implications for this information it becomes clear that teachers may observe student performance to identify how best students can be taught information, as well as various ways students may effectively demonstrate their understanding. Providing children with multiple ways to express what they know about concepts allows for more authentic assessment of understanding.

Related Research

Three areas of research were examined to provide an academic framework for this study on the role of music in early literacy learning. Literature was reviewed in the academic domains of: 1) phonological and phonemic awareness; 2) brain research related to early literacy learning; and 3) integration of music with literacy learning.

Research studies on the importance of phonological and phonemic awareness as a predictor of early reading success were reviewed. Additionally, a focus was placed on research that concluded phonemic awareness could be taught through musically integrated activities. Current brain research was examined to provide necessary insight related to brain plasticity, neurological systems utilized during literacy learning, sensitive periods for acquiring new knowledge, and memory pathways utilized when recalling learned information. Literature related to the integration of music during instruction as a means to elevate attention or alleviate stress was also examined. Current neuroimaging research which explored the neurological systems of efficient and non-efficient readers provided insight regarding the biological impact of literacy acquisition.

Research studies that provided a link between music and literacy learning were reviewed to provide deeper understanding of the multiple areas of the brain that are engaged in the music and literacy learning process. Literature that provided insight regarding the parallel systems of auditory and visual processing of information related to learning to read music and/or text allowed for a greater understanding of the complex processes involved in the complex task of literacy acquisition.

Phonological and Phonemic Awareness

The process of learning to read is extremely complex. Educators, policy makers, and parents often look for early indications of one's ability to "be a reader." It has been determined from a number of empirical studies and when looking at correlational studies between IQ and reading achievement that IQ is *not* a strong predictor of early reading achievement (Griffith & Olson, 1991; Stanovich & Siegel, 1994; Wolfe & Nevills, 2004). Phonemic awareness *is* considered to be one of the leading school-entry predictors of a child's ability to learn to read in kindergarten or first grade (Share, Jorm, Maclean, & Matthews, 1984). Phonemic awareness is the ability to focus on and manipulate phonemes in spoken words. It is a focus placed on the structure of words, apart from their meaning. According to Adams (1990) "[phonemic awareness] may be the most important core and causal factor separating normal and disabled readers" (pp. 304-305). The National Reading Panel (2000) determined that phonemic awareness is one of the five components of quality reading instruction. This may be established through phoneme manipulation tasks such as phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme segmentation, and phoneme deletion as described below (Ehri & Nunes, 2002, p. 112):

1. Phoneme isolation, which requires recognizing individual sounds in words.
2. Phoneme identity, which requires recognizing the common sound in different words.
3. Phoneme categorization, which requires recognizing the word with the odd sound in a sequence of three or four words.

4. Phoneme blending, which requires listening to a sequence of separately spoken sounds and combining them to form a recognizable word.
5. Phoneme segmentation, which requires breaking a word into its sounds by tapping out or counting the sounds, or by pronouncing and positioning a marker for each sound.
6. Phoneme deletion, which requires stating the word that remains when a specified phoneme is removed.

The term phonemic awareness is often confused with phonics, which is a method of teaching reading. Phonics programs may or may not include a phonemic awareness component. Phonemic awareness is critical to children's ability to read in that it provides the framework for their understanding of the alphabetic system.

Value of Phonemic Awareness Instruction

There have been many studies that have determined a strong relationship between phonemic awareness and learning to read. In a study conducted by Lundberg, Frost, and Petersen (1998), kindergarten children were introduced to a program designed to provide structured phonemic awareness training over a period of eight months. As the year continued the manipulations expected by the children increased in difficulty. The experiences began with basic listening activities, followed by rhyming activities, then segmenting of sentences into words and then to syllabic analysis. Children were expected to identify, isolate, segment, blend and delete individual phonemes. The short-term effectiveness of this eight month program was determined by comparing the children in the control group with the children in the experimental group. The children in the group receiving the phonemic awareness training were able to manipulate phonemes

with more accuracy than the control group. This determined that the phonemic awareness instruction was effective. The long-term effects of the training were also assessed. The same children who had received the training and been in the control groups were assessed in the seventh month of first grade as well as the seventh month of second grade, assessing how many words they could read and spell accurately. In the seventh month of first grade, the phonemic awareness trained group could spell more words accurately than the control group, but the two groups did not differ on the number of words read accurately. However, in the assessment given during second grade, the phonemic awareness trained group outperformed the control group both in spelling and reading tasks, demonstrating that phonemic awareness training provided prior to formal reading instruction increases success in learning to read during the next two years.

This study has been replicated by Lundberg et al. (1998) in different languages: Finnish, Hebrew, German (Ehri & Nunes, 2002). One additional finding in the later studies was that the effectiveness of administration of the teaching by the teacher had an impact on the effectiveness of the training. In a study in Germany, 22 teachers implemented the Lundberg program. However, only nine taught the program correctly and consistently to its completion. Only the students of those teachers showed gains beyond the control group, thus demonstrating the importance of teacher commitment to the teaching of phonemic awareness within the context of the reading program (Ehri & Nunes, 2002). This research provides evidence of the benefit phonemic awareness instruction can provide to early literacy learning. This also recognizes the value of systematic, effective teaching.

In a study completed by Hatcher, Hulme, and Ellis (1994), the benefit of adding phonemic awareness activities to a structured reading intervention program was examined. This study was completed in the context of a Reading Recovery™ (Clay, 2006), an intervention program for at risk children who have completed one year of schooling. This study examined whether or not the effectiveness of Reading Recovery would be increased by teaching children to perform different phonemic awareness skills, such as segmentation, blending, deletion, substitution, and transposition of phonemes. Children in the phonemic awareness treatment group also practiced linking graphemes to phonemes in the context of spelling and writing tasks. The children involved with this study were seven years of age and had been noted as struggling in reading performance.

The study was conducted over a period of nine months and utilized a control group and three treatment groups. One treatment group was provided with the traditional Reading Recovery program, another included phonemic awareness instruction with Reading Recovery instruction, and the third group provided students with phonemic awareness instruction alone. Students were assessed immediately following the treatment as well as nine months later. The results of this study showed that the Reading Recovery program, *without* the additional phonemic awareness activities, outperformed the control group on only one of five different reading measures. The Reading Recovery program *with* added phonemic awareness instruction outperformed the control group on five different reading measures (Ehri & Nunes, 2002). When assessing students nine months after treatment, only those students who received the phonemic awareness instruction continued to perform at the higher level. This provides evidence that phonemic awareness improved the effectiveness of Reading Recovery instructional support.

Some reading researchers have considered phonemic awareness deficits to be at the center of reading disabilities. When the National Reading Panel (2000) conducted their meta-analysis of research in reading, it was designed to determine if phonemic awareness instruction was effective in helping children learn to read. Fifty-two published experiments were located and all of the studies measured reading as an outcome of instruction. Although the experiments differed somewhat, statistical analysis was conducted and the statistic that was used to report the performance of different instruction was that of effect size (Ehri & Nunes, 2002). The results of this meta-analysis determined that phonemic awareness instruction was effective in teaching phonemic awareness and contributed to improved reading and spelling. The findings also demonstrated that phonemic awareness training provided the greatest benefit to young children, from preschool age through first grade, and was especially helpful to preschoolers and at-risk students having low phonemic awareness prior to instruction. Phonemic awareness instruction was especially effective when provided in a small group setting, but individual and class instruction was beneficial as well. The method for implementing instruction was considered and the research showed that teachers can be effective at implementing this instruction in their own classrooms. A final confirmation that came from this analysis was that phonemic instruction that incorporated the use of letters into the instruction was found to have a significantly larger effect on learning. The findings support the belief that phonemic awareness is a valuable part of instruction for young readers and can be strengthened if accompanied by letter study (Ehri, 2004).

Ball and Blachman (1991) conducted a study of 90 kindergarten students to gauge the effectiveness and benefit of phonemic awareness training towards early word

recognition and developmental spelling. One of the groups was provided phonemic training in segmenting and instruction in letter names and sounds. The second group was provided training only in letter names and letter sounds, while the third group received no intervention. The intervention was monitored with pre-and post-testing and the intervention continued for seven weeks. The two experimental groups met (in addition to their regular reading instruction) in smaller groups of five for 20 minutes four times each week. One of the groups was provided segmentation training and letter naming/sound training using a hands on approach using the manipulation of letter tiles to segment sounds. The letter/sound training included picture cards, hand-clapping, and games and drills that emphasized letter and sound relationships. In the second experimental group, the children were provided general vocabulary development activities, the opportunity to listen to stories, and completed the same letter/sound instruction received by the phoneme awareness group. After post-testing, the results of the study indicated that students can be taught to effectively segment phonemes. This study supports previous findings which state that phoneme segmentation training that closely resembles the task of early reading can have more immediate effects on reading than instruction that does not make this explicit connection (Ball & Blachman, 1991).

This research-based connection between early reading skills and phoneme segmentation may extend beyond its impact on early reading. Stanovich (1986) suggests that educators may actually initiate a “causal chain of escalating negative side effects” (p. 364) if effective phoneme instruction is *not* provided to children who struggle with segmentation skills. He points out that students who struggle with this begin to be exposed to much less text than stronger readers and many times the materials that these

students are provided are too difficult to effectively practice building automaticity and speed, leaving little opportunity to build comprehension.

Concepts About Print

Additional research studies conclude that attending to phonemes as well as examining the patterns of children's understanding of concepts about print can lead to quality instructional decisions. In a study conducted with 145 kindergarten students, Nichols, Rupley, Rickelman, & Algozzine (2004) concluded that students who are learning to read should be taught how to consciously attend to phonemes in words. While phonemic awareness is a significant component in successful engagement with literacy, literacy learning must also include development of children's concepts about print. They looked at subgroups of children; identifying students by gender, socioeconomic status, preschool experience, and race. Students were administered the Curriculum-Based Literacy Assessment Revised (CBLA-R), a teacher-based assessment tool that included portions of Marie Clay's Observation Survey (1993). Teachers were provided with the results of this assessment and incorporated the use of those results in the planning of their instruction. Teachers were provided four professional development sessions to provide them with ideas and strategies for teaching phonemic awareness and concepts about print to kindergarten children. Initially from the pre-test it was determined that low SES children and Latino children were at greater risk for not developing phonemic awareness and concepts about print, as they scored below other children in the diagnostic section of this study. However, the results at the conclusion of the study indicated that those students who came from low SES, who had no preschool experience, or were of Latino heritage made positive gains.

It can be concluded from this study that explicitly teaching phonemic awareness to children not only is beneficial to average learners, but strongly enhances the performance of at-risk children, including those from low SES or ESL backgrounds. The researchers conducting this study noted that teachers should realize the important role they have in developing the phonemic awareness of children, as well as their understanding of concepts about print. They also concluded that the most effective instruction uses informed diagnostic information to meet the needs of individual young learners.

Multiple Pathways toward Phonemic Awareness

Phonemic awareness instruction in the kindergarten classroom can take on many forms. Researchers do agree that it should be child appropriate. Yopp and Yopp (2000) identify that songs offer opportunities for children to auditorially recognize the phonemic patterns of language. They suggest the use of singing with bodily movement around the room to help children identify rhyming patterns and especially note the benefit of children creating their own lyrics. These songs allow children to manipulate language patterns. “The activities are playful and appealing while deliberately focusing attention on the sound structure of spoken language. They spring from children’s literature, music, or traditional childhood games and therefore are easily incorporated into rich literacy programs” (Yopp & Yopp, 2000, p. 17). Research has demonstrated the critical value of phonemic awareness in developing strong early literacy skills. Yopp (1992) suggests that educators look for ways to explicitly and implicitly teach phonemic awareness. Music provides a medium for phonemic awareness instruction.

Phonemic awareness, as a critical predictor of the early literacy success of children, must be considered when determining essential elements of a reading program. Instruction that helps children attend to the smallest units of sound has been determined to be beneficial to their success as readers. It has been determined that phonemic awareness can be taught, and doing so increases a child's understanding of the English language system.

Relevant Brain Research

Current brain research has growing implications for literacy instruction. When reviewing brain research, several reoccurring themes seem to be present. By examining the neurobiology of language and reading acquisition, educators can make sound instructional decisions and determine what the best pedagogical practices are as they consider instructional implementation for specific students. Those themes consist of 1) brain plasticity; 2) the importance of sensitive periods of development; 3) neurological systems used in the reading process; 4) neurobiological difference in students that exhibit a reading disability; and 5) the connections between learning and memory. Interesting research can also be located that identifies changes in brain processes that occur when a learner is exposed to music.

Brain Plasticity

Brain plasticity refers to the capability of the brain to change in structure and function due to experiences. Wolfe and Nevills (2004) state that the critical years for literacy learning are from birth to age eight. They state that in the areas of cognition, young children are very responsive to instruction due to the fact that their brains are more

“malleable, plastic, and open to new learning than at any other time during their formal education” (p. 101). When children are learning in the classroom, their brains change both chemically and structurally (Hardiman, 2003). Therefore, when the child is struggling with the tasks involved in reading, early intervention is critical (Wolfe & Nevills, 2004). The basis of this finding resulted from studies of the brain structure of rats that were exposed to impoverished environments and enriched environments. The rats living in the enriched environment developed a thicker cerebral cortex, while those living in the impoverished environment developed a thinning of their cerebral cortex (Diamond & Hopson, 1998). This study set the foundation for subsequent studies and demonstrated that the brain exhibits changes in structure due to immersion in an enriched environment.

Sensitive Periods

A second common theme found within current brain research is the concept of sensitive periods in which optimal learning can occur. Neurologists have noted that during the first four months of a human embryo’s life approximately 200 billion neurons are formed, and yet half of those will die off during the fifth month (Hardiman, 2003). The pruning of these neurons is a natural process and occurs at the same time the brain is growing dendrites, or connections between nerve cells. Diamond and Hopson (1998) discuss this neural pruning as a critical time for brain development. Connections that are repeatedly made during the learning process are strengthened, while unused cells begin to be pruned away, due to their weakness. This process is critical in allowing the human brain to focus and work efficiently (Hardiman, 2003; Hodges, 2006).

Research done by Harvard University confirms that there are certain windows of opportunity for learning that will completely close if the brain does not receive environmental input (Hardiman, 2003). Vision, for example, must have early stimuli in order to develop normal connection within the brain. Children also have been found to have a critical period for hearing and language acquisition. If a child doesn't hear human language by approximately the age of ten, neural pathways that would normally provide activation for language are lost (Hardiman, 2003; Smith, 2005). These critical periods are considered different than sensitive periods. Sensitive periods, the time when optimal neural connections can occur, are not closed to future connections; the connections may simply not be as efficiently made (Wolff & Brandt, 1998). This pertains to the learning of phonology of language. Wolff and Brandt's (1998) studies determined that it is the early neural connections made that cause children who have been exposed to the phonological system of a second language to learn that language with relative ease, yet adults who were not exposed to this phonology struggle when learning a new language as an adult. After the window of opportunity closes, the brain loses some of its sensitivity to making those lasting neural connections. For scientists, sensitive periods reflect the brain's response to the world it has encountered. The brain one develops is a reflection of the uses put before it. It is to be noted, however, that this study did recognize that the brain is able to reorganize itself and allow for most learning to occur at any age.

Neurological Systems Utilized in Literacy

Structures that work together for learning to occur have been identified as neurological systems by Berninger (2002). He states that there are five critical brain functions needed for literacy development. Those include sensory, motor, aural/oral

language, cognition/memory, and attention/executive functions. Children must be able to visually fixate on letters in order to process visual information. This ability appears to increase with age and it is with that understanding that younger readers are provided with larger fonts and are more successful with fewer words to process on each page. Motor system deficits may be the cause for children who struggle with oral motor planning. Brain systems must be working efficiently for children to plan what is to be read and then organize the oral motor skills needed to produce the spoken word. To read aloud the speaker must make motor decisions as to how the mouth must move in order to articulate the sounds. That movement must then be controlled. Berninger (2002) noted that children with this deficit exhibited false starts, hesitations, repetitions, and filled pauses with “um” causing dysfluency in oral reading.

The brain receives stimulation through experiences and as experiences are repeated more neural connections are recruited, making the synapses more efficient and stronger. The concept that neurons that fire together become “wired” together applies here. Although the number of neurons may decrease, the number of connections can continue to increase, strengthening a response (Smith, 2005). As neurons fire together, neural pathways are formed and strengthened allowing for learning to occur. To provide an understanding of these connections the link between learning and memory must be examined.

Learning and Memory

Learning of information is only effective if what has been learned can be retrieved as needed, when needed. According to Sprenger (1999) there are more types of memory than just procedural and declarative memory as many have reported in the past. Multiple

memory systems are found to occur in the brain and each one of the systems has different memory functions (Hardiman, 2003). These memory systems are an integral part of how children organize information; therefore these play an important part in providing children with the processes needed for learning to read. *Short-term or immediate memory* provides a way for information to be retained for immediate use, then to be discarded. Sousa (2005) notes that this type of memory is just retained long enough for the learner to determine what type of action should be taken regarding the importance of incoming information.

Working memory is a form of limited, temporary memory and holds information in order for conscious processing to occur. Items in working memory demand attention and focus. Research completed by Sousa (2005) documented that working memory generally occurs within the frontal lobes of the brain, although at times other connections are seen. Working memory allows the learner to “chunk” information for more efficient processing. It is working memory that provides the opportunity for information to be rehearsed and organized. The amount of time information can remain in working memory increases as one ages, from five to ten minutes for children to ten to twenty minutes for adults (Sousa, 2005).

In the context of reading, a child’s ability to store words in working memory can be determined by the child’s language proficiency, age, and experience (Sousa, 2005, Wolfe & Nevills, 2004). Repeated practice of a string of letters (such as a word that is repeatedly encountered) allows information to be processed by the brain as a “chunk,” storing the particular set of letters as a single unit of information allowing more cognitive energy to be provided for comprehension of the text (Wolfe & Nevills, 2004). In the

context of reading instruction, it is the limited capacity of working memory that causes young children to struggle with comprehension of long and complex sentences. During the reading process, working memory helps children preserve the syntax (word order) of a spoken or read sentence in order to allow the child to process the meaning of the sentence.

In her research on *long-term memory* storage, Sprenger (1999) identified five pathways for memories to be stored as long-term memories. These included semantic, episodic, procedural, automatic, and emotional memory pathways (Sprenger, 1999). Memories are encoded along one of these pathways for recall at a later time. Semantic memories are memories that are held in memory as words. Episodic memories relate to space and location of the encoding of the memory, the association of an event with a location. Both semantic and episodic memories are processed through the hippocampus, a cortical structure near the center of the brain that plays an important role in memory (Smith, 2005). Procedural memory refers to the encoding of a memory that relates to an action; it is the memory of muscle activities, such as catching a ball. Procedural memories are processed through the cerebellum, an area of the brain that controls movement and is responsible for some aspects of memory (Smith, 2005). The fourth type of memory pathway is automatic memory. Automatic memories are also processed through the cerebellum and are often encoded through recitation. Naming letters, multiplication facts, decoding of sight words are types of memories that are encoded through automatic memory pathways. Music is one of the most powerful means for enhancing automatic memory (Sprenger, 1999).

The final memory pathway is that of emotional memory. The amygdala processes memories with strong emotional content. The amygdala consists of paired structures that recognize innate biological fears and then activate relevant automatic responses. Located in the lower frontal areas of the temporal lobes, the amygdala adds emotional content to memory experiences. (Sylwester, 2005). Music can be a powerful stimulus for emotional memory (Sprenger, 1999). If content is emotionally charged, hormones, such as cortisone, prepare the body to meet a stressful situation when this memory is recalled. Smith (2005) found in his research that it appears from brain imaging that separate areas of the brain are utilized in recall of these different types of memory and this may be of importance to educators. He states that this information may lead educators to finding benefit in having active, motion-enhanced, procedural encoding that accompanies their verbal instruction. This understanding may also lead to educators turning to music as a way to enhance memory and recall.

There are two ways in which music may enhance memory systems to increase learning. One is in the activating of attentional systems and the second is by activating and strengthening multiple memory pathways (Jensen, 2000). Music has the capability to increase attention to timing, sounds, and perception while immersing the listener with emotional content. When students attend to something they are more likely to be able to recall it at a later date. “Music aides memory because the beat, melody, and harmony serve as ‘carriers’ for the semantic content” (Jensen, 2000, p. 73). Jensen (2000) states that this is the reason it is easier to recall words to a song, rather than words from a conversation. It is believed that children learn more easily and retain information for a longer period of time when music, including rhyme and rhythm are present (Jensen,

2000; Wolfe, 2001). According to Jensen (2000) recall improves when the learning is accompanied by music:

Music when used as a carrier (or accompaniment to content learning, provides a powerful superhighway straight to the brain. The value of embedding lyrics in music is that learning this way activates emotional responses, as well as memory in the auditor cortex. Songs, specific melodies, rhythms, and tones all have the potential to engage content learning in this way...Several repeated actions or hand motions accompanying the song further enhance the learning by providing a reflexive response, which acts as a trigger for the associative cortex. Learning this way is not only more fun, content gets stored in multiple memory pathways making retention and recall more likely (p. 84-85).

Colwell (1994) reports that in a study conducted with 27 kindergarten children, music was incorporated into their whole language reading program. The young children were divided into three groups. One group participated in spoken text rehearsal; one group participated in singing text rehearsal and a third group participated in spoken and singing text rehearsal. When tested on recall and analyzed for miscues regarding substitutions and omissions of the text, the groups that were exposed to the music scored better than the purely spoken rehearsal group (Colwell, 1994). This supports the concept that music can be a facilitator of verbal, or semantic, memory. The repetition of words placed within rhythm and rhyme is a common memory strategy that adults and children use. It is easier for children to remember words if they have been repeated within the context of a rhyme (MacClean, Bryant, & Bradley, 1978; Wolfe & Nevills, 2004). Nursery rhymes, for example, engage children in the listening of language, noting

patterns and rhythms of language. Through nursery rhymes and songs, children can be provided phonological information while increasing vocabulary within the context of enjoyment (Wolfe & Nevills, 2004).

The Impact of Stress Levels on Learning

Researchers have studied the role that emotions play in learning and memory and the related educational implications. High stress levels can impede memory due to hormones that are released by the amygdala which cause a change in cognitive functioning. However, researchers have also found that positive emotions can contribute to long-term memory enhancement and higher-order thinking processes (Hardiman, 2003). Research has also found the opposite to be true. Goleman (1998) found that acute stress can impede one's ability to function intellectually and sustained stress "can have a lasting dulling effect on intellect" (p. 76). Animal studies have indicated that the hippocampus, the central processor for memory, actually shrinks when an animal is exposed to long-term stress (Hardiman, 2003).

There are opportunities to enhance learning by emotional connections as well. Laughter, for example, has been found to cause chemical changes in the brain and can increase the body's production of neurotransmitters. The importance of neurotransmitters such as serotonin, dopamine, endorphin, and norepinephrine on behavior should be considered when teachers consider classroom climate and make educational curriculum decisions. These neurotransmitters are found to enhance alertness and memory and even boost the immune system (Howard, 2000). Researchers are currently studying the use of music in the classroom as a possible trigger for the release of these positive chemicals.

Cambell (2000) found that music contributed to a relaxed and alert mental state in his research leading to his work entitled *The Mozart Effect*. He also found in his research that listening to music resulted in a slowing of the listener's heart rate and more active brain wave patterns; he then concluded that this relaxed, positive, receptive state of mind sets the ideal stage for learning. He further noted that between the ages of six and eight there exists a dramatic period of growth in brain development causing an actual growth in the dimensions of the skull. That study noted that there were brain wave pattern changes that occurred when subjects listened to soft classical music. Current research has found that listening to music, as well as singing, causes the brain to release neurotransmitters (Sprenger, 1999).

Motivation is found to be critical to increased brain arousal and attentional focus (Berninger, 2002). Smith (2005) found in his research that the brain demonstrates an ability to function at a higher level when the learner is motivated. He comments that motivation is the act of putting emotion into action. This was determined by chemicals that are released throughout the body when new experiences occur and information is committed to memory. This has implications regarding memory and recall. Jensen (2000) notes that the more intense the emotional arousal received from the amygdala when encoding information, the stronger the imprint will be, aiding in recall and learning.

The importance of this information lies in the practical pedagogical decisions that can be implemented based on this information. It is important for educators to create a classroom environment that is relatively stress-free and then seek to provide positive emotional connections within the teaching of content. Learning should be a positive experience.

Neurobiological and Neurochemical Implications in Reading Ability/Disability

Neuroimaging is a tool that can provide educators with information regarding links that may exist between behavior during literacy instruction and brain activation. Current brain research that will be cited in this review will provide information regarding differences that are found in brain function when reading disability or lack of proficiency is found, and research that provides information regarding changes in brain processing resulting from well-designed literacy instruction. Research studies that meet the criteria for scientific rigor provide a very consistent but quite basic view of the brain circuit that supports reading ability (Papanicolaou, Pugh, Simos, & Mencl, 2004).

The brain consists of four lobes that reside in each of two cerebral hemispheres. These lobes are labeled according to their location within the brain: frontal, parietal, occipital, and temporal lobes. At the junction of the parietal, occipital, and temporal lobes, the angular gyrus provides a bridge between the visual word recognition system the brain uses and the remaining language processing systems (Sylwester, 2005; Wolfe & Nevills, 2004). The visual cortex in the occipital lobes of the brain, the area known as Wernicke's area, and Broca's area are all critical areas activated during literacy practice. The visual cortex accepts visual information and begins to process that information, beginning the reading process. In the primary visual cortex activation is found bilaterally, but, for other areas, the left hemisphere of the brain exhibits stronger response during literacy tasks (Papanicolaou, et. al, 2004).

Wernicke's area is located in the left hemisphere very near to the auditory cortex. It is known as the semantic processing center and allows a reader the conscious comprehension of spoken words (Sousa, 2005; Wolfe & Nevills, 2004). Broca's area

appears to allow the reader to convert words into speech, allowing for expressive language production. This area is also thought to help the reader engage syntax systems, checking for grammatically correct structures essential to meaning (Sousa, 2005; Wolfe & Nevills, 2004).

Technology has allowed researchers to identify neurological pathways that readers use when processing words in text. Functional magnetic resonance imaging (fMRI) has allowed for great advances to be made in understanding the neurological implications of reading tasks on brain activation. Other imaging techniques require injections of radioactive substances and are considered too invasive to be used on children during scientific studies. fMRI technology has allowed scientists to identify neural pathways in a non-invasive way, as the blood flowing to areas of the brain is detected by magnetic receptors, providing images of areas with higher brain activation during a task. These pathways can vary due to the experience of the reader. The novice reader utilizes a relatively slow pathway that leads from the visual cortex area of the brain where the letters are perceived to the word analysis region, in what is known as the parietal-temporal region (often referred to as the word analysis area of the brain). This area of the brain works together with Broca's area in order to analyze the word at a phonemic level for the word to be decoded. This is a relatively slow process and can be made even slower if the reader needs to review the words on the page more than once (Papanicolaou et al., 2004; Sousa, 2005).

Another brain circuit, which processes faster, is activated by more skilled readers and is involved with skilled printed word recognition. This is accessed with familiar printed words and relies on complex visual processing in the base of the brain

(Papanicolaou et al., 2004). Evidence seen in brain imaging research has shown that beginning and early readers activate Wernicke's and Broca's areas of the brain but do not show substantial activation in the faster circuit (visual cortex) as skilled readers would. Some researchers argue that this is the reason that the reading of pseudowords is not processed within the faster circuit (Papanicolaou et al., 2004). That process changes with experience and it is found in the skilled reader, that with repeated exposure to a word, the brain stores visual information in the occipito-temporal area of the brain (often described as the "word form" area of the brain). This allows for words to be read more rapidly as experience builds the capacity of this area of the brain.

Several studies have also reported that with a reduction in the word processing regions of the left hemisphere, compensatory activation is seen in the right hemisphere (Papanicolaou et al., 2003; Pugh et al., 2000). Intervention studies have determined that changes can be seen in brain activation patterns after intervention programs, even if they are brief interventions (Simos et al., 2002). In a particular study conducted with eight children with severe reading disability it was noted that after an intensive remediation program, brain scan evidence revealed a greater activation of Wernicke's area and a reduction in the activation of the right hemisphere of the brain. This study demonstrates that explicit instructional interventions can alter the activation patterns seen on neurological scans.

Recent medical technology has allowed researchers to identify biological and chemical patterns that occur in text processing of children who struggle in learning to read. Only recently, with the use of fMRIs have researchers been able to produce evidence that indicates that reading disability has a biological signature (Shaywitz et al.,

2000). This technology has allowed researchers to view which brain systems are used in common when tasks appear to be different (Sandak, Mencl, Frost, & Pugh, 2004). The brain is still developing as young children are learning to read and this process is dynamic. What has been noted is that when looking at the function of the brain systems, the processes appear to be disorganized in those who demonstrate reading disorders (Sandak et al., 2004).

A study conducted by Shaywitz and Shaywitz in 1998 used fMRI to document the flow of blood to the areas of the brain responsible for language processing while subjects were asked to perform tasks that involved phonological processing. Significant differences were found in the brain functioning between the non-impaired readers and those with reading disabilities. As the task demanded more phonological processing, the students with disability failed to increase the activity in the area of the brain responsible for language and over activated anterior areas of the brain, commonly used for short memory tasks (Shaywitz & Shaywitz, 2004).

Through their research, Shaywitz and Shaywitz (2004) have identified what they refer to as a “neural model for reading” (p. 433). They have studied both children and adults with and without reading disability and have noted that in children with dyslexia there is a disruption of the posterior reading systems of the brain in the occipito-temporal area (the word form area) and an increase in Broca’s area which can be noticed by children who tend to sub-vocalize when struggling during the reading task. They also found that there is an increase in activity seen in the frontal lobes of the brain, an area that helps engage memory. What is most exciting in their research is that they demonstrated that effective instruction can cause a change in learner’s neural pattern.

After a year long intervention in which children received one hour of explicit phonological training each day, they made significant gains in fluency and experienced greater left-hemispheric activation in the brain regions important for reading, including the occipito-temporal (word form) reading systems. The impact of instruction or remediation on neural patterns has been documented in other studies as well (Berninger, 2000; Pugh et al., 2000; Richards et al. 2000):

This evidence provides great hope for increasing our understanding of the fundamental neural underpinnings of reading and reading disability and provides compelling evidence that researchers and educators now have the knowledge and the ability to develop these automatic systems in poor readers. These findings underscore the importance of teaching and the impact of effective reading instruction on the very brain systems responsible for skilled reading. This new and exciting level of evidence of the functional neural lesion in reading disability and its potential reparability represents, we believe, both an educational and a moral imperative to provide the type and quality of reading instruction that make it possible for virtually all children to become better readers (Shaywitz & Shaywitz, 2004, p. 436).

Neurochemical patterns have been noted in those with and without reading disability. Richards et al. (2000) conducted a study with the purpose of determining the effectiveness of phonologically based instruction and how that instruction might be demonstrated by a chemical change in the brain. His study involved ten to thirteen year old boys, including eight who had severe reading difficulty, family histories of dyslexia, and little gains despite previous assistance received in the school setting. The training

program involved three weeks of a reading/science workshop in which the students were provided with training at the phoneme level (sub-word level) as well as training in larger phonological units. Subjects participated in sound games, counting of syllables and phonemes and several listening tasks at real word and nonsense word levels. Using proton MR spectroscopic imaging, lactate levels were measured on the dyslexic participants (n=8) and non-impaired readers (n=7) while they engaged in four different cognitive tasks (three language tasks and one non-language task). Prior to phonological training the boys who struggled with reading exhibited lactate levels in the phonological processing level of the brain four times that of those who did not struggle with reading. Lactic acid is a byproduct of the use of glucose, indicating exertion of brain cells. The larger amount of lactic acid in the dyslexic children would indicate that their brains were working harder to accommodate the task of reading.

At the conclusion of the treatment period the boys receiving the phonological training improved an average of 8.9 points on the decoding word attack subtest of the Woodcock Reading mastery Test-Revised. They also were assessed in oral reading of text and three scored at grade level, three above grade level, and one was still below grade level. Students were re-tested one year later and had maintained a gain of 8.7 points on age-corrected standard scores. Their word attack (decoding) skills were reported to be between low average and average, one year beyond treatment. The main finding, however, was that after the treatment the dyslexic children had reduced the amount of lactic acid produced within the brain indicating that the phonological training was effective in providing the students with increased efficiency during reading tasks. The value of this study is the indication that attending to phonological instruction can

increase the efficiency of reading tasks in students that struggle in reading, and this efficiency can be documented in chemical changes that occur within the brain.

These reported studies appear to indicate that a systematic, intensive, and comprehensive approach to reading instruction that supports the phonological understanding of children will help children develop their reading abilities. Phonological based training, implemented with struggling readers, appears to increase the brain's efficiency when reading text. This response to instruction is evident in brain activation patterns.

Brain Research Regarding Music

In exploring how the brain is engaged in learning, it is interesting to examine how music can interact with the process of engaged instruction. Imaging of brain activity has provided documentation regarding brain activation patterns during exposure to music. Wolfe (2001) reported that exposure to music activates multiple areas of the brain in both hemispheres:

In fact, many musical experiences can activate the cognitive, visual, auditory, affective, and motor systems, depending on whether you are reading music, playing an instrument, composing a song, beating out a rhythm, or just listening to a melody. The mental mechanisms that process music are deeply entwined with the brain's other basic functions, including emotion, memory, and even language (p.161).

If children hear rhyming songs and are read to from rhyming books, their brains begin to identify the sounds that comprise language. If children enter school with weak phonological understanding, it is imperative that teachers assess them to design

appropriate strategies to move them to an understanding of phonemic awareness. It has been demonstrated that with proper instructional intervention the brains of young struggling learners and dyslexic readers can actually be rewired to use cerebral areas that more closely resemble typical readers (Sousa, 2005).

Music and written language have brain activation parallels, but are not processed in the same way. It appears that exposure to music actually leaves an imprint on the adult brain. There are supportive studies to indicate that those who study music, especially beginning at an early age, actually show neurological differences when compared to those who have not had any musical training. These findings do not appear as increased intelligence, but rather an ability for more efficient response to musical tasks (Hodges, 2006). Oral and written language is processed in the inferior temporal lobe of the brain, primarily the occipito-temporal lobe and Wernicke's area. During brain scans this is seen to primarily occur in the left hemisphere of the brain. Music is most often processed within the right hemisphere of the brain, areas previous research often has linked to emotional well-being. However, it is interesting to note that if listeners are experienced in music, they often process music using the left hemisphere, as if it were a language. Music with lyrics is also found to activate more areas of the brain than instrumental music alone. If movement or actions accompany a song, more neural pathways are activated.

The Literacy/Music Connection

As stated by Hansen, Bernstorff, and Stuber (2004) there exists shared connections between the auditory and visual processes that are activated by language, music reading,

and music learning. The following discussion examines specific commonalities between auditory and visual processes used when a child processes alphabetic or musical text.

A selected list of the auditory processes that are applicable to the processing of spoken text or performed music follows. The ideas presented originate in the work of Hansen, Bernstorff, & Stuber (2004).

- *Auditory analysis* allows children to identify phonemes and morphemes that are embedded in words, just as they identify tones and specific sounds that are embedded in a musical context.
- *Auditory association* allows for the identification of a sound with its source.
- *Auditory attention* allows children to attend to the auditory signals for an extended time, whether the sounds are present in speech or vocal or instrumental musical.
- *Auditory blending* allows the listener to synthesize isolated phonemes in to words, or in the case of music establish the contour or pattern in music, whether that pattern is melodic or rhythmic.
- *Auditory discrimination* allows listeners to differentiate between similar words and sounds, whether those sounds are musically orientated or speech related.
- *Auditory figure-ground* allows a listener to separate the primary source of information from background noise, just as it would allow a listener to selectively identify a musical line, instrument, or pattern found in a song.

- *Auditory memory-sequential memory* allows listeners to be able to store and recall sounds in the order in which they were heard. Whether in listening to speaking or music this is tied to short or long term memorization. Localization refers to the listener's ability to attend to the source of sound, whether musical or speech sound, allowing closer attention to the message provided by the speaker.

In their joint work Hansen and Bernstorff (2002) also identified visual processes that are utilized both in reading of text as well as in the reading of music. These terms provide a visual processing link between visually decoding text/ or music:

- *Visual analysis* is the ability for the reader to identify letters, icons, or symbols embedded in text or a musical piece.
- *Visual association* is the reader's ability to associate a sound with a visual symbol, whether that be an alphabetic letter, or a musical note or symbol.
- *Visual attention* is the ability of the reader to focus attention for an extended time on text and/or musical notations.
- *Visual blending-proximity* refers to synthesizing single letters into words or reading rhythm or melody from musical notation.
- *Visual closure-completion/projection* is the ability of the reader to understand the whole word or message when part is missing. [This would be linked to the occipital-temporal (word form) processing referred to in following sections of this paper]
- *Visual discrimination* refers to the reader's ability to differentiate among graphemes that may look very similar as well as in the context of music

the reader being able to differentiate among musical elements such as pitch intervals, markings for tempo, etc.

- *Visual figure-ground* ability assists the reader with identifying an image from background images and helps the reader focus on the text or musical notations.
- *Visual memory-sequential memory* assists the reader to recall and store various visual images while visual continuation allows the reader to connect letters into word forms, words into phrases through the recognition of patterns.
- *Visual separation-tracking* refers to the ability of a reader to focus on one stimulus while ignoring others in another visual field. An example of this would be attending to a sentence or notation of music, without being drawn to the sentence or line that appears above or below the one being read.
- *Visual-spatial functions* refer to an understanding that objects or symbols keep their form regardless of where they are seen in the text. (Bernstorff & Hansen, 2001).

Hansen and Bernstorff (2002) identified the reading skills involved with reading words and reading music with connections being seen at both the symbol and text level. They provide specific examples to demonstrate where both in reading text and reading music, systems and processes are held in common. Those would include phonological awareness, phonemic awareness, orthographic or grapho-phonemic awareness, sight identification, cueing systems (context, syntax, grapho-phonemic, and the semantic

systems), and the processes for fluency. Hansen, Bernstorff, and Stuber (2004) also note that comprehension can be taught through musical activities. Using music which includes lyrics, teachers can design instruction that requires students to find the main idea, sequence, summarize and predict while enhancing instruction with higher level questions to challenge the students' understanding of texts.

Several research studies have been conducted that have examined connections between music and cognitive abilities. Many of those studies have involved trained musicians and their ability to excel in various cognitive tasks. The studies reflected upon in this review provide information regarding music experiences that are used to engage children and the findings related to their literacy learning and cognitive tasks.

Kolb (1996) stated that the disposition children have towards rhythm and melody identifies music as an ideal tool for the teaching of reading, writing, listening, and speaking. To expand upon this premise Register (2001) conducted a study of the effects an early intervention music curriculum had on pre-reading and writing skills. Two 30 minute sessions each week were conducted during an entire school year. The students in this study had a mean age of 55.5 months and had been identified in need of early intervention. The students were pre- and post-tested on measures that assessed logo identification, letter and word identification, and Marie Clay's (1993) Concepts about Print checklist. At the conclusion of each session during the first 15 weeks of the study the children were asked to illustrate immediately after the music session something they did in music that day. The children also dictated their thoughts to the teachers to be placed at the bottom of the illustrations.

During the second 15 weeks of the study the children compiled a songbook which included the words to songs they were learning during music time. They were taught one song per week and illustrated the songs they were learning. They used this songbook to reinforce and review reading and print concepts. The curriculum used included the use of books, word and letter, cards, charts and other visuals that were used to reinforce target skills (Register, 2001). The control group received sessions for the same amount of time, but activities that promoted pre-reading and writing skills were not included in their sessions. They also were not asked to complete the post-session illustrations. The experimental group used an alternative curriculum utilized in a previous study conducted by Standley and Hughes (1997). The results of this study found that the experimental group scored significantly higher than the control group, thus providing evidence that music sessions that contain academic literacy objectives were more effective than general music experiences in promoting the acquisition of literacy skills.

Gromko (2005) conducted a study to determine if music instruction was related to gains in the phonemic awareness abilities of young children. Her work with 103 kindergarten children compared children who were provided music instruction with children who were not. The children in the treatment groups were provided weekly 30 minute music instruction from January until the end of April. All children were assessed with the Dynamic Indicators of Basic Early Literacy Skills test (DIBELS) (Good, Gruba, & Kaminski, 2002) prior to instruction and at the end of the research study. During the instructional period the children learned to sing new folk songs from a variety of cultures. They also accompanied their singing with simple body percussion or basic kinesthetic movement. The instruction encouraged an understanding of steady beat, word rhythm,

and high or low pitches. Some rhythm instruments were used to reinforce the rhythm or melody of the song. The children also used a chart with graphic representations to allow them to “see” the way the music would go, reinforcing basic concepts about print. At the conclusion of the study it was noted that while the treatment and control groups did not significantly differ in letter-naming fluency, there was a significant difference in phoneme-segmentation, with the treatment group displaying significantly greater gains after music instruction. The results supported near-transfer hypotheses that suggest that active music-making accompanied with experience in sound/symbol reading may help students develop cognitive processes that may help them attend to individual phonemes in words (Gromko, 2005).

Douglas and Willatts (1994) recognized that studies previously conducted which explored the role of musical training and the development of literacy skills often involved, as participants, trained musicians. Therefore, in their work they chose to study young children that had *no* professional musical training. They based their study on past research conducted by Wisbey (1980) that reported possible connections between pitch and rhythm and literacy skills that stressed the importance of pitch training as a benefit to reading instruction. Douglas and Willatts (1994) did not intend to suggest that musical training is a necessity for good literacy skills; rather, they proposed that perhaps children who have been identified as struggling in reading might benefit from a structured program that included musical activities. They hypothesized that providing the children with some musical training in pitch and rhythm might develop their ability to be aware of sounds students hear in speech.

This study, conducted in Scotland, identified 12 children with a mean age of 8.9 who were identified as struggling readers. The children were given a pre-assessment for reading ability. The groups were then matched by reading ability and placed in the intervention group or control group. The intervention group then was provided with a program designed to develop the children's auditory, visual and motor skills. The program used vocal music and tuned and untuned percussion. During each session the children played a variety of "games" that incorporated rhythm and pitch with an emphasis on auditory or visual processes, and sometimes a combination of both. The activities changed each week to keep the interest level of the children high. The control group participated in non-musical activities which were based on development of discussion skills regarding reading. The children were encouraged to work together and share opinions and ideas about the topics discussed. As with the intervention group, care was taken to vary the sessions in order to maintain a high level of interest. The students were given the assessment again at the end of the six month period. The difference in the reported reading scores between the groups at the final assessment was not significant, but the final scores were significantly higher than the initial assessment: $F(1,10) = 7.0$ $p < .05$. The scores from the intervention group increased significantly from the first assessment to the final assessment. The researchers concluded from this study that there is a connection between reading ability and musical ability and that training in musical skills can lead to an improvement in these abilities. They report that this type of training combined with other intervention strategies is what is needed to increase literacy learning (Douglas & Willatts, 1997).

Butzlaff (2000) identified several reasons to hypothesize that music instruction may help children acquire the ability to read. He stated that music and written text both utilize formal written notation that requires a left-to-right pattern for reading. He also reported that written code is linked to specific sounds. He hypothesized that practice in reading of music may help in the reading of other texts. He also thought that when reading text it is critical to attend to phonological distinctions and in a very similar way music attends to tonal distinctions. The third connection he made was that when students learn lyrics for a song they are engaging in reading a written piece of text. Lyrics of songs are usually very repetitive and, therefore, predictable. The practice in reading this predictable text may assist students in general reading skills. The final connection was one of increased motivation. He identified the benefit of social interaction when one is a part of a larger musical group and stated that the responsibility each student has to the group provides them with a feeling of personal responsibility which can have a positive impact on performance. Focusing on these four hypothesized thoughts, Butzlaff (2000) conducted a meta-analysis of research studies dating from 1950 through 1998. The research studies he considered met the following criteria: as a dependent variable they used a standardized measure of reading ability; students were tested on reading ability after receiving music instruction; and statistical information was available to allow for effect size to be calculated.

During the meta-analysis Butzlaff (2000) studied six experimental and 25 correlational studies to search for connections between music and reading. It is important to note that not all these studies were conducted on young children, as some reflected the performance of high school students. Of the correlational studies he could only identify

four that involved elementary students and only two of those studies involved the classroom teacher providing the music instruction. However, in the analysis of the 25 correlational studies there was a strong and reliable association between the study of music and student performance on standardized reading/verbal tests. This does not provide an explanation for the association. Students could have possessed strong reading skills prior to choosing music instruction as an elective in school. These students may also have chosen music because their families valued and supported both music and reading, or there could perhaps be a causal relationship existing between music instruction transferring to heightened reading ability, or the reverse could be true as well.

The review of experimental studies provided no reliable results (Butzlaff, 2000). The effect sizes from the six studies varied greatly and Butzlaff determined the results were not stable. One interesting thing to note is that in the more recent studies, a larger effect size was found which may be attributed to several factors, one being experimenter expectancy. There was also great variety between the studies as to who provided the instruction, as well as how control groups and experimental groups were determined. Looking at the statistical analysis a somewhat significant relationship between music and reading can be seen; however, Butzlaff does not believe the relationship is “large, robust, or reliable” (p. 176). Due to the findings of this meta-analysis, further research regarding connections between music and reading ability is needed.

Summary

It is recognized that children construct their own understandings and that understanding is mediated through social events. Children engage in literacy learning while interacting not just with a text, but through interaction with other children and

adults. It is through this interaction that oral language opportunities can provide a basis for a child's communication through reading and writing. Educators must recognize and celebrate the fact that each child is unique, bringing multiple gifts and talents to the process of literacy acquisition. It is imperative that teachers allow children multiple pathways towards this journey towards literacy, recognizing the strengths that each child brings to the task, their multiple intelligences. It has been identified in numerous research articles that effective instructional techniques, especially in the realm of phonemic and phonological awareness, can be instrumental in activating the neural pathways that enable children to learn both effectively and efficiently. One avenue of this learning may be through the use of music in a literacy learning context. The teacher holds tremendous power and ability to implement this type of curriculum enrichment. It is imperative to explore the possibilities for literacy engagement through careful planning and knowledgeable pedagogical practices.

CHAPTER 3 - Methodology

This chapter provides a description of the research methodology used within this study. This qualitative case study was designed to explore the way a kindergarten teacher and a music educator engage kindergarten children in literacy experiences. The information that follows is organized in the following sections: research design, pilot study, setting of the study, role of the researcher, timeline, data collection, data analysis, and establishing mechanics for trustworthiness. This study was guided by the following questions:

How is music integrated in a kindergarten classroom to engage and motivate children in early literacy learning?

1. What types of instructional methods, experiences, and techniques occur in a kindergarten classroom to engage students in literacy learning?
2. How is music integrated within the context of literacy instruction in the kindergarten classroom?
3. How do a classroom teacher and a music educator view connections between music and literacy practices of young children?
4. How do kindergarten children perceive connections between music and literacy experiences in the classroom?

To study these questions, a qualitative case study research approach was taken in order to explore the processes that occurred in a kindergarten classroom as children were engaged in literacy instruction.

Research Design

This study was conducted as an observational case study. Qualitative case study research allows a researcher to approach a problem with a holistic perspective. According to Merriam (1998), case study research is often seen as the best method of research to understand practice and extend understanding within the field of education. A case study design provided the opportunity to focus on this kindergarten classroom in depth. As Merriam (1998) relates, the focus should be on the process, rather than the outcome, and on the context, rather than a specific variable, with a goal of discovery, rather than confirmation.

Researchers of literacy recognize that learners and teachers bring meaning to talk and text within a physical setting and the social interactions that occur within that setting (Dyson & Genishi, 2005). The observation was focused on what instructional methods, experiences, and techniques a kindergarten teacher and a music educator use to engage children in literacy learning. One classroom of 18 kindergarten students was observed over a nine week period to note their engagement, reactions and interest in activities provided to promote early literacy learning. This study provided the researcher the opportunity to observe one group of children engaged in learning throughout the day with a focus on literacy instruction. Children were observed both in the kindergarten classroom, under the guidance of an experienced kindergarten teacher, as well as in their vocal music classroom, under the guidance of a qualified music educator.

Pilot Study

A pilot study was conducted during November 2006 to provide broad insight into the proposed research design. To conduct the pilot study, I contacted area principals and

teachers that are affiliated with a university Professional Development School Partnership, asking for names of kindergarten teachers who were known to use music during their instructional day. I then identified five kindergarten teachers to contact, requesting the opportunity to observe for a two to three hour period during a typical kindergarten day. I asked that the time I was there encompass their literacy instructional period as well as any other time of the day they might engage the children in music. I also requested that the teachers allow me to conduct a brief 15 to 20 minute interview during my visit to their schools. I scheduled my visits at the teachers' convenience. The five teachers that were observed represented four different schools located in two districts in close proximity and in partnership with the local university (Appendix A-1).

Two of the teachers I chose to observe were using a district approved program, Zoo-phonics™ (Bradshaw, Wrighton, & Clark, 1999). One of these teachers was beginning her third year of teaching, while the other teacher had taught for many years using varied approaches to literacy instruction including basal instruction as well as whole language experiences, prior to her introduction to Zoo-phonics. Two other teachers I chose for this pilot study chose to use the district's adopted basal series as a resource, drawing from many additional resources to teach the district standards. These four teachers all taught in a district that provided a half-day kindergarten program. However, that district has decided to transition to a full-day program for the 2007-2008 school year. The fifth teacher that I observed taught in a different district, one that had just transitioned to a whole day kindergarten program. This district has adopted the Success for All KinderCorner™ Program (Slavin & Madden, 2003). This teacher brought experience as a full-day kindergarten teacher on the east coast. This was her first

semester using this program and she supplemented it with other materials that she had used in previous teaching. During the pilot study observational sessions, I arrived prior to the beginning of the school day and identified a place where I could observe unobtrusively. Upon arriving in the classroom I requested the teacher's signature providing me with written permission to conduct the observation (See Appendix A-2). I sketched out the layout of the classroom, especially noting where literacy materials were kept and their accessibility to the children. I took notes regarding literacy learning tools such as charts, books, word walls, and recorded information regarding the classroom environment.

When the children arrived I recorded my fieldnotes on a two column sheet, allowing me to write observation notes on the left column and my reflective thoughts and comments on the right column. I did not seek out conversations with children, and only interacted directly with them when approached by a child or when requested by the teacher. After the first visit I began to notice that I was able to identify literacy experiences by their relevance to the five components of the National Reading Panel (2000) report. In addition to the five literacy instruction components, it became evident that the teachers also used music to transition children between activities and to focus their attention. The ability to look at these areas of instruction was reinforced during the remaining four visits.

I used a clipboard and paper to record all my observational fieldnotes and then transcribed them on the computer later in the day. During the transcription I added to the reflection column, noting the components of reading instruction as well as identifying

when music was integrated. As I became more familiar with the learning environment, more efficient use of technology facilitated recording of this data.

The pilot study helped me acquire a greater comfort level interviewing teachers; I recognized that I gained richer information by simply allowing each teacher to openly discuss his/her program, rather than asking specific questions, even if the questions were open-ended. I narrowed my initial list of questions to three questions:

- Please tell me about the literacy program you use in your classroom.
- Please share with me your ideas about the use of music during instruction.
- Please tell me about any changes you have noticed within the context of teaching kindergarten- or changes you would like to see in the future, regarding kindergarten programs.

I occasionally would need to probe with more detailed questions, but these broad questions appeared to serve well to generate rich thoughts, ideas, and beliefs from each educator. The teachers were eager to share their ideas about literacy instruction with me as well as voice their concerns regarding the implications of accountability in the context of early literacy education.

I found it extremely helpful to audiotape the interviews and then transcribe them within one day. I occasionally wrote down notes as we talked, but found that I could more attentively listen to what the teacher had to say if I could make eye contact. It seemed that they would quit talking when I would begin to write during the interview. Therefore, I began to write less, but continued to check to make sure that the tape recorder was continuing to record. To record personal reflections regarding the interview

notes, I developed a two column format. This also was found to be quite helpful in recording themes and ideas regarding initial coding of the recorded information.

I found that my initial coding of data was conducted by sorting literacy experiences into categories as defined by the five components of quality reading instruction as stated in the National Reading Panel (2000) report -phonemic awareness, phonics, vocabulary, fluency, and comprehension. I noticed that there were uses of music that did not appear to fall into those categories, so I found myself recoding data by literacy experiences, use of music, and then looking at the intersection of the two categories. I determined that with the limited time I was in the field, and perhaps due to the kindergarten observation, most of the activities that I recorded were placed within the phonemic awareness/ phonics components; however, the other components were represented as well.

During interviews with the four teachers teaching in the half-day programs, it became quite evident that they believed they would be more effective preparing students, and providing children with more depth of instruction, including literacy instruction, if allowed an entire day of instruction. All four of the teachers expressed a desire to move to full-day programs in order to best meet the needs of their children. Also, three of the five teachers shared that they believed they would use more music within their instructional day if provided with a full-day kindergarten schedule. This information was used to inform my decision for selecting the full-day setting of this case study research.

At the conclusion of the pilot study I believed there were two voices missing; that of the music educator in the building, and that of the children. I found myself wanting to investigate if the music teacher saw connections between the music and literacy programs

in the school. I then began to wonder if there was time for collaboration between the kindergarten teacher and the music educator in the building as no one had ever mentioned the music educator in our conversations. One teacher stated that she had worked with the music educator to plan the end of year program, and stated that she taught the fingerplays for the program while the music teacher taught the songs. I did not acquire information from the interviews that would lead me to think that the teacher and the music educator collaborated or communicated regarding instruction.

I also found myself wanting to acquire more information about the children than I could identify through their facial expressions and body language to determine their level of engagement. I believe that the study would be enriched by including the voices of children in hearing their thoughts, beliefs, and ideas of how they view connections between music and literacy learning. As Vygotsky (1978) has noted, we can learn much from observing children's conversations. Those conversations can help us view learning through the lenses of the learners. During the pilot study my focus remained on the teacher during my brief visit. I occasionally made fieldnotes on the participation or engagement of the children. I believe this was a weak area of my observation and one that I wanted to make more rigorous during the case study through the use of selective videotaping and more focused notes on student reactions, engagement, and participation.

Setting of the Study

The criteria for this study were guided by information from the pilot study. Teachers interviewed during the pilot study continued to voice that they believed they would be more effective in their literacy instruction if they were teaching in a full-day program. They especially noted that they would have more time to engage children in a

more balanced program that would include ample amounts of reading, writing, listening, and speaking opportunities. They also said that they would use more music and teach subjects in more depth if they had a full-day program model. Teachers also shared that when a scripted program was used, they felt obligated to follow that program and literacy activities were not always determined by teacher decision making, but by the program being utilized.

Therefore, I concluded this research would provide the best information if conducted in a classroom engaged in a full-day kindergarten program that provided instruction within a literacy model that encouraged teacher decision making regarding instructional methods, materials, and techniques. I also concluded that this study should be conducted in a district which provides music instruction on a daily basis so I would be able to follow the class in their daily literacy and music practices. It also appeared critical to select a site for this research where teachers had the opportunity to provide a variety of literacy experiences for their students. This would allow teachers the chance to make instructional decisions, rather than instructional decisions being guided by a scripted literacy program.

School

The school setting for this study is located in a rural Midwest town with a population of approximately 4,000. This town is situated 30 minutes from the state capital and in close proximity (20 – 40 minutes by car) to three universities. The school is the only school in the district that provides instruction for preschool through second-grade students. The school has a current enrollment of 313 and provides an Early Childhood Special Education program for children three to five years of age, although

that program is housed at another nearby campus. The average class size at the time of this study was 21 students and the average ratio of teacher to children is 1:14. The school is fully accredited by the state, and according to the school's website, the emphasis in the primary grades resides with literacy and numeracy skills. The curriculum provides for literacy, mathematics, social studies, science, and character education classes taught within the context of the individual classroom with vocal music, visual arts, technology, and physical education classes being taught by specialized teachers in auxiliary classrooms.

The school has invested time and funding towards implementation of Reading Recovery™(Pinnell, Deford, & Lyons, 1988), which was first implemented during the 1997-1998 school year. The current reading methodology, guided by the work of Fountal and Pinnell (1997), guided reading, began the year after the implementation of Reading Recovery™. According to the building principal, the district looked at research findings to better strengthen their literacy program, and the teachers began by studying Fountas and Pinnell's (1996) book *Guided Reading: Good First Teaching for All Children*. They have continued their use of guided reading since that time. Guided reading instruction provides reading instruction in the context of dynamic and flexible groupings of children by specific needs and interests. Children are provided with leveled texts to read at their instructional level and are supported in the reading by small group instruction.

The teachers consulted with a literacy coach as they made a commitment to use guided reading as their model for literacy instruction. They began using guided reading during the 1998-1999 school year. Weekly meetings allowed the teachers to share not

only experiences, but also ideas regarding management of the program (literacy center ideas, etc.) Students in first grade are also provided access to Reading Recovery, if they qualify, through their assessment score identified by administration of an Observation Survey (Clay, 2006). During the period targeted for guided reading instruction each day a reading assistant, who is a certified teacher, assists with half of the guided reading group instruction. The classroom teacher writes the plans and communicates with the reading assistant as to the goals and objectives for the children, but the reading assistant teaches two groups each day. After a period of a few weeks, the groups were switched in order for both teachers to have the chance to work with all children.

Guided reading in this school is also supported during kindergarten and first grade with the Animated Literacy™(Stone, 2002) curriculum developed by Jim Stone. Lessons occur early in the morning prior to guided reading lessons. Animated Literacy draws upon recent brain research, language, and reading research to provide an integrated curriculum with a strong phonological awareness component. During Animated Literacy lessons, students participate by listening and responding to books that are read aloud by their teacher. They are then asked to actively participate when hearing books, rhymes, stories, and songs. Their participation may include gestures or oral response of words and phrases, using an interactive reading format. Animated literacy instruction is skill-based, sequential, and supported by movement and song. The lessons are language-based and include opportunities for reading, writing, listening, and speaking. The building principal reported that “by the middle of first grade or certainly by second grade kids have mastered phonic skills and we can then concentrate on comprehension, text structures, and fluency” (Principal, personal e-mail communication, December 29, 2006).

The basic premise of this study was discussed with the building principal who showed an interest and willingness in allowing me access to the site. Several months earlier in a conversation with me, the principal had stated that several of her teachers used music in their classrooms and that she had noticed that those teachers seemed to have fewer retentions and Reading Recovery referrals. The interest that the principal demonstrated in that conversation encouraged me to contact the building principal when seeking a location for this study.

Purposeful selection of the site and participants for this proposed study was guided by the information gleaned during the pilot study. The proposed research site provided an established full-day kindergarten program taught by an experienced classroom teacher. The school provided daily instruction in music education by a qualified music educator. The literacy program was not scripted, allowing for flexibility within the literacy methodology and empowering the teacher as a decision maker. Upon recommendation of the building principal, I provided a general summary of the research topic to the superintendent requesting permission to observe within the school. The superintendent shared the information provided during a local school board meeting as an information item and it was approved by the school board. In addition to that e-mail correspondence, the principal presented me with a letter acknowledging her willingness, and the willingness of other participants, to participate in this study. After receiving this permission to conduct the research, I acquired approval for the study from the Committee on Research Involving Human Subjects (Appendix D-1).

An initial brief visit to the school occurred in October, 2006. At that time a conference was held with the principal to review the purpose of the study and I was

introduced to the classroom teacher, Mrs. Miller, and the music educator, Ms. Lyons. The kindergarten children were on their way to another location and so a formal introduction to the children did not occur. However, we exchanged smiles and waves. I then corresponded with the principal and teachers to clarify times that the scheduled observations would occur.

Classroom Teacher and Music Educator

During this study the kindergarten classroom teacher and the music educator continued with their respective roles in the school setting, as they had since the beginning of the school year, planning, implementing, and assessing all instruction during the school day as determined by their contractual obligations. The daily schedule had been in place since the beginning of school, so the children were accustomed to the routine which did not change. The classroom teacher selected for this proposed study, Mrs. Miller, was selected due to her years of experience and her known use of music in the classroom as determined by the building principal. She has been with the district as a primary teacher for 36 years, 28 of those years in kindergarten. She has a Bachelor of Science degree in elementary education and a Master of Science degree in special education. In addition to her degrees, she has completed 33 post-graduate hours in education. Mrs. Miller has served in various leadership roles within her district. She has recently served on a committee to provide guidance for the Kansas State Department of Education regarding kindergarten readiness. She has served as the kindergarten representative on the school's language arts committee and has been instrumental in her district's process of curriculum mapping for content and skills (K-12) in the area of language arts.

Mrs. Miller was actively involved in her school's adoption of the guided reading instructional model and serves as a mentor to new teachers in her building. She specifically has the role of serving as a mentor to Ms. Lyons during her first year of teaching. She served on the steering committee to explore the implementation of the full-day kindergarten program in her district, prior to her district's transition to full-day kindergarten in 1999. She frequently hosts visiting teachers and administrators that wish to learn more about effective full-day kindergarten programs. Mrs. Miller is known for her dedication to professional development. She frequently seeks new and innovative information by attending state and regional conferences and participating in her building and district in-service opportunities. She has been recognized for her excellence by receiving nominations for the KTPK (Topeka, Kansas Radio Station) "Teachers Who Make a Difference" Award (2001), Elementary Teacher of the Year Award (2002), as well as the KNEA-SP Outstanding Teacher Award (2002).

The music educator, Ms. Lyons, was new to the building this year. She is a recent graduate of a well-respected music education program at a state university. While the university she attended is accredited by NCATE, the program that she completed is also fully accredited by the National Association of Schools of Music. Her program of study provided her with a Bachelor of Music Education degree, with an emphasis on vocal music as well as elementary music. Ms. Lyon has worked as a private voice instructor and has mentored children at a music camp for elementary students. While completing her university degree she held several leadership positions and was awarded the Donald E. Stout Vocal Award.

Ms. Lyon's mother has been a kindergarten teacher for many years and in that capacity Ms. Lyon has become familiar with certain academic expectations of kindergarten children. She stated that she was familiar with the Animated Literacy™ curriculum implemented in this research setting prior to her current employment. Ms. Lyon is the only music educator in the building and is responsible for daily music instruction of all children-kindergarten through second grade.

Classroom

The district transitioned to a full-day kindergarten program during the 1999-2000 year after the district site council researched the issue and community informational meetings were held. The recommendation to transition to full-day kindergarten was unanimously approved by the school board and students remain in school for the entire day, five days a week.

In a report provided to the school board it was stated that the full-day kindergarten students continue to achieve at very high levels in successive grades. Data have been recorded on each class as they advanced into higher grade levels. Scores recorded from the Stanford Diagnostic Reading Inventory document increasing scores since the implementation of the full-day kindergarten program. The report also noted in this district that less retention has occurred in grades beyond kindergarten and fewer students are now qualifying for special education since the full-day kindergarten implementation. The district has increased learning outcomes since the implementation of the whole day program as documented in the following table.

Table 1: Full- Day Kindergarten/ Student Achievement

| | Half-Day K | 1st Year Full- Day | Full- Day | Full- Day | Full- Day | Full- Day | Full- Day |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|--|--|
| Indicator | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| Concepts About Print | 74% Mastery | 93% Mastery | 95% Mastery | 98% Mastery | 96% Mastery | 99% Mastery | 99% Mastery |
| Guided Reading Mastery Level | 50% Mastery At/above Level C | 87% Mastery At/above Level C | 93% Mastery At/above Level C | 98% Mastery At/above Level C | 93% Mastery At/above Level C, 41% At/above Level D | 99% Mastery At/above Level C, 65% At/above Level D | 94% Mastery At/above Level C, 70% At/above Level D |
| Peabody Picture Vocabulary Test | Average 17 mo. gain | Average 20 mo. gain | Average 22 mo. gain | Average 20 mo. gain | Average 22 mo. gain | Average 18 mo. gain | Average 20 mo. gain |
| Visual Motor Memory | Average 14 mo. gain | Average 22 mo. gain | Average 25 mo. gain | Average 22 mo. gain | Average 22 mo. gain | Average 23 mo. gain | Average 22 mo. gain |

Reading instruction in this kindergarten is provided for 90 minutes daily. There is a 60 minute block in the morning and a 30 minute block in the afternoon. Music instruction is provided daily in the music education classroom for 20 minutes. Although the schedule (Table 2) was used in initial scheduling of time spent in the classroom, it was evident from the initial day of observation that literacy opportunities were provided throughout the day. Therefore the scheduled time during the day was expanded when possible, which allowed for observations during all parts of the day.

Table 2: Daily Literacy/Music Kindergarten Schedule

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--|--|--|--|--|
| 8:30 – 9:30 Whole Group Instruction: Animated Literacy | 8:30 – 9:00 Animated Literacy | 8:30 – 9:00 Whole Group Instruction: Animated Literacy | 8:30 – 9:30 Whole Group Instruction: Animated Literacy | 8:30 – 9:30 Whole Group Instruction: Animated Literacy |
| | 9:00- 9:30 AM Technology | 9:00 – 9:45 Library | | |
| Milk Break | Milk Break | | Milk Break | Milk Break |
| 9:40 – 10:15 Learning Centers: Guided Reading | 9:30 – 10:15 Learning Centers: Guided Reading | 9:45 – 10:15 Learning Centers: Guided Reading | 9:40 – 10:15 Learning Centers: Guided Reading | 9:40 – 10:15 Learning Centers: Guided Reading |
| 10:20-10:35 Recess | 10:20-10:35 Recess | 10:20-10:35 Recess | 10:20-10:35 Recess | 10:20-10:35 Recess |
| 10:40 – 11:00 Music Instruction | 10:40 – 11:00 Music Instruction | 10:40 – 11:00 Music Instruction | 10:40 – 11:00 Music Instruction | 10:40 – 11:00 Music Instruction |
| 1:50 – 2:20 Reading Reinforcement | 1:50 – 2:20 Reading Reinforcement | 1:50 – 2:20 Reading Reinforcement | 1:50 – 2:20 Reading Reinforcement | 1:50 – 2:20 Reading Reinforcement |

Children

This specific classroom included 18 children - nine girls and nine boys. Of the 18 children enrolled in this class, four of the students were identified as being low socio-economic level. One child is multi-racial and 17 are Caucasian. Apart from Brandon, who was receiving special education services, several other children in this room were

being monitored for developmental speech/ language needs. Those concerns did not seem to prevent any child from fully participating during learning opportunities.

Diversity was seen through physical characteristics, personality traits, past experiences these children had, interests, and abilities. The children spent each day interacting with one another in various whole and small group settings and were expected to work independently as well. They had built a community of learners and each one of them enriched the learning of the others.

Seated at the first table inside the classroom door, was Gabriella. She had a tendency to come to school late, especially during the early stages of this study. She often would enter the room accompanied by her mother. Her mother would take Gabriella's items from her book bag while Gabriella would begin to monitor what others in the room were doing, as this was the job she liked best. She had been working very hard this semester to follow the rules of the classroom. She brightened the room with her energy, and shared her table with Ellen. Ellen was a quiet, round-faced girl with long, straight, blond hair. She approached her work with a quiet perseverance. She was quick to help someone else, but not so quick to seek help for herself. She was seated close to Shawn. Shawn attended kindergarten last year with a different teacher. His red hair and freckles were a constant that an observer would note, as his demeanor changed frequently throughout the day. At times he was exuberant and the center of all that was going on sitting right in front of the teacher during stories and group discussions. Other times, frequently first thing in the morning, he was sullen and took on the stance of pouting, arms crossed and head buried in his arms, refusing to join in with the activity. Using a combination of distracting him and consoling him, Mrs. Miller would invite him back to

an attitude of learning. Once he engaged in a task, he often took great pride in what he had done and desired the chance to share his success with others.

Seated with his friends was Carl. Struggling a bit with motor skills, Carl is a rather tall boy, and a willing helper. He was a good friend to the others and was often chosen by classmates when they needed someone to help in a task. They knew they could count on Carl. Jennifer's dark, curly hair framed her sparkling eyes and ready smile. She was a high energy child that loved to share her ideas and comments with those around her. This was most often a wonderful strength that she possessed, but on rare occasions she found she needed to move to another table to get her work completed - or to allow others to complete their tasks.

Amanda was a small girl with long, flowing brown hair and brown eyes. She had a love for reading and took great pride in the independence she had in reading materials on her own. She was seated next to Bobby. Bobby had great ideas to share, but at times he took a while to get started on tasks. He liked to talk with his friends and loved to be outside playing. He sat across from Makayla. Makayla loved to move and dance, yet she was a thinker. It was obvious that she took her time to soak in what was happening around her. Before beginning a task, she would sit for a short while and watch what others were doing before she would begin. It did not appear she did this to borrow their ideas, just to prepare her own thoughts about what she wanted to do. She was a focused child, able to work without being distracted when placed next to Brandon.

Brandon had been diagnosed with an anxiety disorder, in addition to autism. His autism was diagnosed at age three and he was scheduled to receive 60% of his services in the resource room and 40% within the regular classroom. He was always assisted by a

full time para-educator, usually Mrs. Grant. When he demonstrated violent outbreaks, more assistance was provided and at times he would need to be taken from the room. Support for Brandon was also provided from a local mental health agency. He wore glasses and often sat in a special red chair during group instruction time. He loved books, especially animal books, and enjoyed reading himself, as well as being read to. Brandon sat across the table from Kaily. Kaily was a high energy child who loved to be with her friends. She had strong verbal skills and appeared to happily go about the task of learning. The children who sat at the table with Brandon were extremely capable of supporting the work of the para-professional and modeled the expected outcome of work, while ignoring Brandon's distracting behaviors. The children appeared to be completely comfortable with the accommodations and modifications provided for Brandon and welcomed him as a member of their learning community.

A second group of tables included Miranda. Easy to notice, Miranda was a taller child with short, brown hair and glasses (when she remembered to wear them). Miranda had an 'eye' for the unique. She loved shiny rocks, large hoop earrings, flip flops that lit up, and long, flowing dresses. She loved to hide little treasures she had found in her pockets or her desk, which at times caused distraction to the point of the teacher requesting that the items needed to be placed in her book bag. She sat next to Billy, a sweet, quiet little boy, his voice nearly inaudible. However, he had strong communication skills. In a quiet place in the room he could carry on a wonderful conversation and read independently. Billy sat across the table from Kyle. Kyle was motivated by peers and always interested in what was going on around him. He sat next to his good friend, Michael. Michael, a very capable little boy, was tuned in to what was

going on around him, especially outside the classroom. He often talked about TV shows, new movies, or the latest toys. His good friend, Ben, sat next to him. Ben was a very small, polite boy. He had a love for motorcycles, cars, and wore a small earring. He offered his chair to me each day so I could easily view the guided reading instruction. He was rather shy, but Michael was always willing to ask questions for him - or interrupt if he thought Ben needed something.

Sitting at the far end of the table was Nathan. Nathan read at a third grade level, yet talked so softly it was difficult to recognize how much he understood, unless one took the time to talk individually with him. He could not only read, but enjoyed explaining what he had learned about reading. He often spoke about his experiences outside the classroom, such as trips he had taken and experiences he had had with his parents. He sat next to Lindsey. She was a tall girl, for kindergarten. Her long wavy blond hair framed her round face that most often had a smile. She was kind and an especially good friend to Brandon, whom she faced across the aisle. She seemed always to be willing to work with a child who didn't have a partner, and offered to share something that was in short supply. She sat close to Jamie. Jamie was a small, petite girl who loved to move and dance. She could feel rhythm and when music was playing, she automatically swayed to the beat. She seemed to enjoy being with her friends and willingly followed the routines of the classroom. Jamie could clearly articulate ideas she wanted to express, and was not afraid to share her thoughts and ideas. Seated at this table, for a portion for the morning, was Craig. Craig came from a first grade classroom to receive reading instruction that best fit his identified needs. He always appeared to be comfortable with this morning transition and happily came in and took his place with the other children. The children

welcomed him during this part of the instructional day, just as they accepted me on my first day in the classroom.

Orientation Visit

The first observation day served as an in-class orientation visit to review the schedule of observations that would work well with the classroom daily schedule as well as the school calendar. Reviewing with both teachers the purpose of the study, I asked them to sign the informed consent forms to gain permission for the study to begin (Appendix D-2). Information was gathered regarding the individual students in the class and the format of literacy instruction. Attention was given to how students are grouped for reading instruction, as guided reading provides for interest and ability small group instruction. I sent a letter to parents providing information regarding the study (Appendix D-3) and requesting their signature on an informed consent form (Appendix D-4). I included self-addressed stamped envelopes with the letter to encourage prompt return of consent forms. All forms were signed and returned which allowed for all children to be included in the research project. An informal observation ensued and I observed the reactions of the children to my presence in the classroom. I then located areas of the rooms that would facilitate unobtrusive use of the computer and unobtrusive selective videotaping of group activities. During this orientation visit, I remained for both morning and afternoon sessions of literacy instruction as well as transitional times and also observed the children's music instructional period.

Role of the Researcher

During this study the main role of the researcher was that of observer. Being a former kindergarten teacher, I acknowledge that an adult in a kindergarten classroom is

rarely ignored. However, my intent was to be primarily an observer during literacy instruction and to participate only upon invitation of the teacher or in a supportive role as the teacher. It was not the intent of this study for me to provide instruction or make curricular suggestions regarding literacy learning. Due to the fact that I was known as a researcher by the teachers and principal in this setting, I was provided with opportunities to ask questions as they presented themselves which allowed new information to emerge throughout this study (Loftland & Loftland, 1995).

It was my intent to observe what naturally would be taking place in the classroom, so it was imperative that I remain as unobtrusive as possible. Bogdan and Biklen (2003) note that appearance of a researcher can affect their ability to remain unobtrusive. While observing in the school setting, I dressed with the same formality as the classroom teachers to appear approachable and comfortable within the setting of the classroom. Due to the extensive engagement in the field, it was expected that I would become familiar to the children in this study, yet I tried to remain primarily an observer in order to accurately record data through field notes and videotaping the implementation of instruction. As was expected the children accepted my presence and interacted with me to a greater extent with each passing week of the study. I was provided the opportunity to share books with them, teach them a song that supported an author they were studying, and help them during their independent writing experiences. As the weeks passed, they began to ask me questions during center time or ask for my assistance while they were working on various tasks. The classroom teacher began to report that they were asking about me on days I was not there and asking her when I would return. The faculty and staff were very friendly and welcomed me into this setting. I was often invited to sit in

on their work sessions during lunch which allowed me to converse with all six kindergarten teachers. I was welcomed and treated as a colleague during my time in the field.

Timeline of the Study

This timeline (Table 3) identifies dates and times for classroom observations as well as the dates for interviews that were conducted with the kindergarten teacher, music educator, and the kindergarten children. The selected days of observations were inclusive of all days of the week as well as all times of day. Most observations were conducted during the specific times of the day relegated to literacy and music instruction (Table 2). Some of the observations were beyond those periods of the day as it became evident that literacy instruction was integrated into all subject areas throughout the entire school day. The schedule allowed for observations to occur in both the kindergarten classroom as well as the music classroom. The scheduled observations began on February 15th and continued through April 23, 2007. The first day of observation I shadowed the children as they attended art class and gym class in order to deepen my understanding of the experiences they had each week. The observation period included the week of parent-teacher conferences in order to allow me the opportunity to visit with parents and answer any questions they may have. Daily observations ranged from 50 minutes to three hours in length for a total of 42 hours of observation over a nine week period. Table 3 provides a detailed accounting of the dates and times of observations that occurred in both the kindergarten classroom as well as the music education room.

Table 3: Timeline for Study

| Date | Time | Event |
|------------|-----------------------------------|---|
| 2/15/07(U) | 8:30AM – 2:30PM | Initial Day of Study at research site (Full Day) IN CLASS ORIENTATION |
| 2/16/07(F) | 8:00 – 11:30 AM 1:45 – 2:30 PM | Observation of Classroom and Music Instruction Observation of Small Groups |
| 2/21/07(W) | 10:30- 11:30 AM | Observation of Music Instruction and Shared Reading |
| 2/23/07(F) | 8:00 – 11:00 AM | Observation of Classroom CLASSROOM TEACHER INTERVIEW |
| 2/26/07(M) | 8:00 – 11:00 AM | Observation of Classroom and Music Instruction |
| 2/28/07(W) | 10:30 – 11:30AM 1:30 – 4:00 PM | Observation of Music Instruction and Shared Reading Observation of Classroom Instruction/ &P.E MUSIC EDUCATOR INTERVIEW |
| 3/2/07(F) | 8:00 – 11:00 AM | Observation of Classroom and Music Instruction |
| 3/5/07(M) | 8:00 – 11:30 AM 1:00 – 1:30 | Observation of Classroom and Music Instruction Presentation on Antarctica |
| 3/6/07 | 6:00 – 7:00 PM | Dr. Seuss Celebration Night |
| 3/7/07(W) | 10:10 – 11:30 AM | Observation of Classroom and Music Instruction |
| 3/12/07(F) | 8:00 – 11:30 12:20 – 2:00 | Observation of Classroom and Music Instruction |

| | | |
|----------------------|-------------------|---|
| 3/15/07 | As Needed | Parent Teacher Conferences: Remaining forms were completed prior to videotaping and interviewing. |
| 3/18/07 – 3/24/07 | | SPRING BREAK |
| 3/26/07(M) | 8:00 – 11:30 AM | Observation of Classroom and Music Instruction |
| 3/28/07(W) | 8:00 – 11:00 AM | Observation of Classroom and Music Instruction |
| | 1:45 – 2:30 PM | Observation of Classroom Instruction |
| 4/2/07(M) | 8:00 – 11:30 AM | Observation of Classroom and Music Instruction |
| | 12:30 – 2:30 PM | Observation of Classroom Instruction/ Library Instruction INTERVIEW CHILDREN: 2 groups |
| 4/5/07(U) | 8:00 – 11:30 AM | Observation of Classroom and Music Instruction |
| | 12:20 – 3:30 PM | Observation of Classroom Instruction INTERVIEW CHILDREN: 4 groups Attended Team Planning Session |
| 4/18/07(W) | 12:30- 2:30 PM | Observation of Classroom Instruction |
| 4/19/07(U) | 8:00 – 12:00 Noon | Observation of Classroom and Music Instruction |
| 4/23/07(F) | 8:00 – 11:30 AM | Observation of Classroom and Music Instruction |
| | 12:30 – 2:30 PM | Observation of Classroom Instruction |
| 4/24/07- 5/26/07 | | DATA ANALYSIS AND REPORTING |

Data Collection

During this study I collected data from multiple sources including the four basic types identified by Creswell (1998), which include observations, interviews, audio-visual materials, and documents. Extensive time was spent in the classroom in order to explore the ways the kindergarten teacher, Mrs. Miller, and the music educator, Ms. Lyons, engage children in their literacy learning. Looking, listening, and asking are noted by Loftland and Loftland (1994) as best addressed by the observer when the participants are aware of the researcher's interest and sincerity in conducting quality research. The intent of this study was shared with the Superintendent of Schools for the district, the building administrator, the classroom teacher and the music educator. Open-ended focused interviews allowed for various perspectives, those of the teachers as well as the children, to be heard regarding literacy instruction and the use of music in the context of the school day. Documents were collected as they became available, and video recordings were collected to capture the classroom environment, reactions of the children, and perspectives regarding engagement, ideas and beliefs of the participants in the study. Multiple sources of data served to strengthen this study and the data converged to provide insight to this study (Yin, 1994), thus establishing trustworthiness.

Observational Fieldnotes

Observation in the field is the process in which a researcher establishes and sustains multi-faceted and a fairly long-term relationship within an authentic setting for the purpose of developing a deeper understanding of a situation or relationship (Loftland & Loftland, 1995). I kept detailed observational field notes in a two column format, using call-outs, which allowed the researcher to include thoughts, reflections, and personal

notations to be kept separate from the recording of observations during the instructional day (Appendix B-1). The notes included detailed description of the participants, reconstruction of critical dialogue, clear description of the physical setting, accurate accounts of particular events, a clear and detailed depiction of specific activities, and clear description of my behavior as an observer (Bogdan & Biklen, 2003). The reflective sections contained written comments on analysis, reflections on instructional methods being used, and additional notes to set the context of the event. I noted the time of day periodically to provide information regarding the length of time students engaged in a task. I reviewed the notes daily after leaving the classroom to check for completeness. Timely review of this data provided direction for future observations during the course of the study. I used a laptop computer to record observational field notes to help in the organization of the data. These rich descriptive notes were a primary source of information during this research study. I updated the notes each day and saved them on a CD to protect data throughout the study. The first day of the study, the laptop appeared to be somewhat of a distraction for the students, but they soon did not attend to it being used during the course of the day.

Teacher Interviews

Interviews allowed for additional information to emerge and provided a deeper understanding for subsequent observations that occurred. The interviews allowed information to be shared and interpreted through the lens of the specific interviewees, and provided important insight into the case (Yin, 1994). I conducted interviews as guided conversations, somewhat structured, but inquiries remained open-ended. As suggested by Creswell (1998) the interviews were audiotaped and then transcribed to assure accuracy

of information. Prior to the beginning of any interview, I requested permission to audio-tape the interview. The recording device used was a small, high quality micro-recorder. I placed the recorder in view to allow me to note if it would quit running for any reason. All data were recorded with adequate quality for transcription. Audio taping allowed better eye contact with the teachers and allowed the researcher to be an active listener in the interview, rather than taking copious notes. The ability to listen carefully usually may stimulate more talking (Bogdan & Biklen, 2003). The audiotapes have remained in my possession and will not be distributed to any second party for any reason. I made transcriptions from the audiotapes within 24 hours upon completion of the interview in order to have data available for analysis.

I conducted an interview with the kindergarten teacher on February 23, 2007, during the second week of the study. The timing of this interview, after a few days of observation, allowed me to review questions and ask for clarification on any procedures that had been observed during the initial days at the research site. At the beginning of this interview the classroom teacher provided an updated resume. My questions for the classroom teacher interview were open-ended and allowed for the teacher to share freely about the literacy program the children are engaged in, as well as allowing her to share thoughts about the use of music during the kindergarten day (Appendix C-1). This interview provided the perspective of an experienced kindergarten teacher and framed the context for the beliefs on which instruction is planned throughout the instructional day. The transcript of the interview was used for future data analysis (Appendix C-2). Although the interview was rather brief, many subsequent conversations and e-mail communication provided additional information and answers to questions.

I then conducted an interview with the elementary music educator on February 28, 2007, at the beginning of the third week I was at the research site. This timing allowed for me to build rapport with the music educator prior to the interview, recognizing that the time I am in the music education room was limited compared with the amount of time I had in the kindergarten classroom. Questions for this interview were also open-ended (Appendix C-3). This interview was to seek to provide the perspective of the music educator in the realm of literacy learning. Open-ended questions provided a catalyst of dialogue allowing the music educator to describe her role as a member of the kindergarten instructional team. Transcripts of the interview provided data for future analysis (Appendix C-4).

Periodically throughout this study subsequent informal interviews or continuing dialogues were conducted to clarify methods, experiences, and techniques the classroom teacher or music educator may employ. Other individuals, including the school principal, librarian, para-professional, and other kindergarten educators were engaged in these conversations as well. To guide these informal opportunities for dialogue, I noted their comments in the observational notes that were kept during each visit.

Children Interviews

I conducted guided conversations with groups of children, ranging from two to four children per group, to provide the insight and understanding that they have regarding music and literacy within their day, both in the school setting and beyond. I chose to visit with the children in small groups with their peers, because it was my hope that they might converse more freely when hearing others share their thoughts and ideas. This also presented the advantage of giving the children more time to reflect and think about their

experiences. The children were used to working in groups with one another and supporting each other during reading instruction, so I speculated that the discussion would be richer and more varied if they conversed with one another as they answered my questions. To begin to engage them in these conversations, I had them view themselves actively engaged in singing within their kindergarten classroom. One of the experiences they viewed was of the songs and actions they did each morning at the beginning of their school day, and the other was of Mrs. Miller sharing a story/ song with them entitled, *There Was an Old Lady Who Swallowed a Shell*. During the sharing of the story Mrs. Miller read/sang the text while the children joined in during the refrain. The children initially all worked to identify themselves in the tape and then appeared to be able to focus on the event being viewed. At the conclusion of the viewing, the tape was turned off and I asked open-ended questions to provide children an opportunity to visit about the role they see music playing in their learning (Appendix C-5).

These guided conversations with the children occurred on two days, April 2nd and April 5th, just beyond the mid-point of the study. This timing allowed for the children to become comfortable with my presence in their classroom. I also wanted to have the chance to meet their parents at parent-teacher conferences to answer any questions they might have had regarding the study prior to the children's interviews. These interviews were structured as group discussions and were scheduled during small group center time. Mrs. Miller chose the groupings in order to best utilize the time without taking instructional time from the children's guided reading sessions. Each conversation lasted approximately 10 to 15 minutes. These small group interviews were audiotaped with the verbal permission of the children and were transcribed as soon as possible following the

interview to maintain accuracy of the information (Appendix C-6). The children spoke their names into the recorder prior to the conversations to help me in identifying their voices during transcription. As the children shared their ideas it became evident that each conversation, although guided in like topics, would provide unique perspectives. I recorded additional conversations with children that occurred at other times throughout the study in the context of the field notes and included them in the data analysis.

Lesson Videotapes

Due to the fact that behavior can be observed, but attitudinal information can only be inferred, I selectively videotaped lessons in order to carefully examine the reactions of children engaged in their learning experiences. This served as documentation regarding the motivation and active engagement of the children in these experiences. Videotaping allowed me to be able to document the facial expression and physical responses of the children and the interactions between students as well as interaction between teacher and students. Videotape also allowed me to listen to conversations that might have been missed as my attention was focused on other interactions occurring in the classroom. It was not my intent to videotape each day; rather, I selected opportunities to provide information on a variety of instructional contexts. Videotaped events included read-aloud events, guided reading sessions, role playing, singing of songs in the classroom, as well as sessions during music instruction. During weekly planning opportunities I communicated with the classroom teacher and music educator to identify brief periods during the day when videotaping of literacy/ music instruction would be possible. The video camera used was a Sony DVD recorder that is extremely small and was run from a side screen to be more discreet during the taping. Use of the high quality setting on my

Sony Handicam provided 20 minutes of viewing per DVD disc, with 8 tapes providing a total of 160 minutes of data documented through the videotape. Dyson and Genishi (2005) caution researchers about recording too much due to the collection of unmanageable amounts of data that would make analysis difficult. The use of a DVD format allowed me to select scenes easily for review and make notations as I reviewed the tapes where specific evidence required further review during transcription. These DVD discs remained in my possession throughout the duration of the study.

Additional Documents/Artifacts

Documents that were collected during this study included such items as:

- Documentation provided by the building administrator regarding the literacy program and its effectiveness, including the report from a research study conducted by a neighboring university regarding comprehensive literacy programs
- Lesson plans/ plan templates provided by the classroom teacher
- Student scoring sheets from formal/informal reading assessments
- Informational brochures or notes shared with parents regarding literacy experiences in the classroom
- Unit plans that show integration of music and curricular areas
- Scheduled dates for teaching of animated literacy concepts
- Written responses, stories, or drawings that children completed during instruction.

During this study I continued to seek to connect the information gained to the research questions, while remaining open to new information that may emerge from the data.

Table 4 provides information regarding the plan for data collection and analysis as it relates to the research questions.

Table 4: Data Collection and Analysis Grid

| Research Questions | Data Collection | Data Analysis |
|---|--|---|
| How is music integrated in a kindergarten classroom to engage and motivate children in early literacy learning? | | |
| What types of instructional methods, experiences, and techniques occur in a kindergarten classroom to engage children in literacy learning? | <ul style="list-style-type: none"> • Observational Fieldnotes • Teacher Interviews • Lesson Videotapes | <ul style="list-style-type: none"> • Listing and description of method, activity, or technique • Relationship of data to the five components of effective reading instruction/ including sub-categories |
| How is music integrated within the context of literacy instruction in the kindergarten classroom? | <ul style="list-style-type: none"> • Observational Field notes • Teacher Interviews • Lesson Videotapes | <ul style="list-style-type: none"> • Listing and description of method, activity, or technique • Relationship of data to components of effective reading that may emerge |
| How do a classroom teacher and a music educator view connections between music and literacy practices of young children? | <ul style="list-style-type: none"> • Teacher Interviews • Provided Documents | <ul style="list-style-type: none"> • Evidence of commonalities and differences in instructional planning and implementation |
| How do kindergarten children perceive connections between music and literacy experiences in the classroom? | <ul style="list-style-type: none"> • Children Interviews • Artifacts | <ul style="list-style-type: none"> • Identification of common themes between groups of children • Evidence documenting connection between music and literacy |

Data Analysis

The transformation of data collected to gain understanding is reflected in careful and timely data analysis. Data analysis is both inductive as well as reflexive (Dyson & Genishi, 2005). I organized the data to gather insight into any intersection that may exist between literacy and music. Dyson and Genishi (2005) speak of data analysis as the building of an analytic quilt. They note that although the researcher's questions shape the quilt, the data itself will provide guidance during the analysis to determine the "pattern" of the quilt as common threads are identified. This type of interpretive research is also considered reflexive in that this understanding will also be mediated by the researcher's understanding and thoughts regarding teaching. The ability to understand will be "mediated by the researcher's own professional, personal, and collective knowledge and experience" (Dyson & Genishi, 2005, p. 82). Data in this case study are represented through detailed narrative focusing on the experiences of kindergarten students learning to read, write, listen, speak, view, and visually represent their understanding, as well as graphic representation of connections that emerged through the data analysis.

Multiple sources of data were collected and analyzed. Creswell (1998) provides the term categorical aggregation when a "researcher seeks a collection of instances from the data, hoping that issue-relevant meanings will emerge" (p. 154). He suggests that the researcher look for patterns to emerge and then seek correspondence between categories that may present themselves. He also recommends that the researcher develop naturalistic generalizations that allow people engaged in the reading of the findings to draw meaning from the data. The rich description included in the study will provide a

context for the findings. Data analysis was ongoing and began with the first observation and interview.

Emergent Coding

In this study, initial coding occurred in the reflective columns of the observational fieldnote documents, the videotape transcripts, and the interview transcription documents. As I reviewed the notes of what had occurred within the instructional day or through conversations with teachers, I initially coded data by bolding the type of critical elements that occurred and then identified how those instructional events were linked to the five components identified by the National Reading Panel (2000) - phonemic awareness, phonics, fluency, vocabulary, and comprehension (Appendix B-1). These components had emerged from the data analyzed during my pilot study. I remained open to new categories as they emerged during this process, and identified that concepts about print emerged as another category to be addressed. I provided personal thoughts and reactions (memos) through the use of call-outs to document additional information while the notes provided additional guidance for focused coding.

Focused Coding

After completion of initial coding I revisited the notes which had been coded and further analyzed this data in several ways. I summarized the various types of experiences that I had seen during the observations and placed them on a chart that identified whether or not the events included the use of music. An event was determined as an activity that was provided to engage the learner in establishing new information or applying information to attain mastery. These events often focused on what the children were

doing - such as reading from a chart, clapping syllables, reading from a big book, or singing a repetitive song. Also the event focused on what the teacher was doing to facilitate the child's engagement - pointing to the chart during reading, using hand gestures to build understanding, or making eye contact with students. I then recorded if the event had occurred within the context of the kindergarten classroom or music classroom. Events that occurred in the library, art room, or with the counselor were also noted. Additionally, I coded if the event occurred in the context of guided reading instruction (small group instruction), whole group instruction, center time, partner work, or independent practice opportunities. This provided a broad view of how literacy was taught throughout the day.

I then coded the events for phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. These components had emerged from my pilot study and are identified in the findings of the National Reading Panel report (2000) as essential elements of effective literacy instruction. Notes were kept regarding sub-categories in the area of phonemic awareness, specifically phoneme isolation, identity, blending, and segmenting. *Phonemic awareness* events included the drawing of attention of the learner to the phoneme level of a word, focusing on the sounds of language, without the viewing of letters. Phonemic awareness events were determined to be aural in nature. It was noted that the more authentic and integrated the event was, the more difficult it was to code phonemic awareness and phonics activities with clear boundaries.

An event was coded as *phonics* instruction if the events included the making of a connection between an identified phoneme and grapheme. Notes were kept regarding sub-categories in the area of phonics, specifically onset/rime, letter identification, and

invented spelling – or instruction related to spelling patterns. I determined that if letters were noted by name, or visibly present to be viewed by the children, then a code of phonics would be given. Often dual codes were present during the rich use of reading and writing events occurring in these classrooms.

Events that were coded as *fluency* included a focus on increased rate, prosody, and automatic word identification. These events also focused on the rhythm and flow of reading and oral presentation of language. Events which were coded as *vocabulary* focused on the meaning of text at the word level. These events often provided opportunities provided by the teacher that included a description of words that enhanced conceptual understanding. Events that were coded for *comprehension* focused on meaning of what was being communicated, either through written communication or oral language opportunities. These events were focused on framing the purpose and deeper understanding of what was being communicated.

Events that were coded for *concepts about print* focused on understanding the underlying components of how text works, including the fact that pages are read left-right, print is tracked left-right, use of return sweep, one to one correspondence, identifying the differences between letters/ words, and use of conventions.

Table 5 presents the system developed to code data that were collected during observations and when reviewing interview transcripts. After coding the data initially using call-outs, this form was utilized to allow for detailed focused coding. All fieldnotes were then reviewed and data were re-coded a second time to check for accuracy of results.

Table 5: Focused Coding Grid

| + 🎵 | - 🎵 | CT Classroom Teacher | ME Music Educator | Coding/ Subcoding | | Description of Event |
|-----|-----|----------------------------|-------------------------|----------------------|----|----------------------|
| | | | | CX | CD | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Coding for **CX** identified context:

- GR= guided reading/small group
- IP = independent practice
- WG = whole group instruction
- PW = partner work
- CT = center time

Coding for **CD** identified component codes

- PA I = phoneme isolation
- PA ID= phoneme identity
- PA B = phoneme blending
- PAS = phoneme segmentation
- PH OR = phonics/ onset/rime
- PH LI = phonics/ letter identification
- PH INV = phonics/ rules- spelling
- CAP = concepts about print
- F = fluency
- V = vocabulary
- C = comprehension

I analyzed data by looking for connections between the classroom teacher's and music educator's use of music within their instructional implementation and/or their shared insight during their respective interviews. Coded information was tallied to determine the balance provided between the instructional components (Appendix B-2). Once coded, the events were viewed as percentages to enable data to be studied regarding practice of the two teachers - the kindergarten classroom teacher and the music educator. I analyzed the materials used for instruction to identify what materials were unique to the individual teachers, and which materials were commonly used by both.

Video Analysis

Video analysis allowed me to review the reactions and interaction of children during literacy instruction. Data obtained were coded on the Focused Coding Grid (Table 5). In addition, I was able to note specific information regarding the engagement of the class as a whole as well as individual student reaction. I viewed videotapes with a class roster allowing me to identify behaviors that were evident during the experiences, allowing me to observe and record behaviors seen during student interaction with one another and student reaction to the lesson in general. I made anecdotal records regarding the task behavior of students, participation of students, and physical evidence of whether or not the children were engaged and enjoying the activity. I was also able to review the tapes to focus on teacher behavior and techniques.

Artifact/ Document Analysis

I analyzed artifacts and documents with focus placed on documentation regarding the effectiveness of literacy instruction, looking for evidence of music integration during

literacy instruction. Scores that document the impact of whole day kindergarten instruction will be included to demonstrate the strength of selection of the research site. Artifacts that were collected consisted of parent information that was disseminated regarding literacy instruction and student writing samples that demonstrated the level of mastery the children had regarding the components attended to during data analysis. Work that was provided by children, perhaps as a reaction to a song they had heard, was analyzed using the Focused Coding Grid and anecdotal records were completed. Data that presented itself as the work of a child were photocopied and analyzed. It appeared very helpful to photocopy the work that was the result of videotaped sessions to be able to carefully view the product of the event that had been analyzed. I recorded additional documentation provided by administration in narrative form.

Establishing Trustworthiness

It is important for a researcher to establish trustworthiness in a qualitative study and a way to provide this basis is the gathering of information from multiple sources of evidence (Creswell, 1998; Merriam, 1998; Yin, 1994). Lincoln and Guba (1985) present terms used more aptly in naturalistic research to provide trustworthiness, those being credibility, transferability, dependability, and confirmability. They suggest that techniques or verification procedures may be employed to establish trustworthiness in the context of a qualitative study. Creswell (1998) suggests that researchers utilize at least two of the following procedures to add rigor to the study: prolonged engagement and persistent observation; rich description; triangulation; peer review or debriefing; negative case analysis; clarifying of researcher bias; member checks; and external audits. In this study five of these procedures were implemented.

Prolonged Engagement and Persistent Observation

I was able to observe in this classroom over a nine week period. Observations were conducted at pre-scheduled times during the day and occurred on various days of the week. Although prior to this study I did not have knowledge of this school or the particulars of the literacy and music programs provided in it, I had spent eight years working with kindergarten children and had a basic music background to provide understanding of common learning behaviors observed in kindergarten children. My background experience allowed me to build trust and rapport with the participants in this study.

Rich Description

During the reporting of this study, it was my intent to paint a detailed picture of the research site. Descriptions of the environment of the community, school, and classrooms are sufficient to visualize the sights and sounds of the instructional environment. Description of the methods and techniques used by the teachers are detailed enough to allow for those that read this study to visualize what has occurred in the classroom in order to recognize similar events and experiences that may occur in other classrooms. Descriptions of the reactions and participation of the children include ample detail to allow the reader to believe they have been introduced to this class of kindergarten children.

Peer Review/ Debriefing

As data was collected and analyzed, I requested a periodic review of data analysis by my major professor to assure that information gleaned from observations, interviews,

and videotaping was being accurately portrayed. This provided an external check of the process of data collection and analysis (Creswell, 1998). These brief meetings were conducted at two week intervals and included the sharing of field notes as well as brief viewing of videotaped sessions with discussion of analysis. Lincoln and Guba (1985) define the role of the peer debriefer as the one who poses the hard questions about interpretations, methods, and meanings. During the debriefing sessions notes were kept by the researcher to assure that comments and thoughts shared during the sessions were implemented in future work.

Clarifying Researcher Bias

From the beginning of this study, I have made clear my belief in the educational value and benefit students receive from music integration within literacy instruction. It is recognized that my beliefs may influence interpretation of data, and, therefore, it is extremely important that other elements of trustworthiness be carefully implemented.

Member Checks

The researcher solicited review of the findings of this research by the teachers involved with this study. As time permitted and as the participant teachers desired, videotapes were reviewed with the teachers and comments of teachers regarding participation of children were noted. The rough drafts of data, analysis, interpretations, and conclusions were shared throughout the study and in more detail on May 16, 2007 with the participants for their review to seek their thoughts on the credibility of the findings. Lincoln and Guba (1985) consider this to be critical for establishing credibility in qualitative research.

Summary

A qualitative case study has been conducted to explore how kindergarten teachers and music educators infuse music into instructional events to engage kindergarten children in literacy learning. Through this study I immersed myself in the world of kindergarten children, exploring their daily tasks as they continued to emerge into masterful readers and writers. Data were collected and analyzed to provide a deeper understanding of how music and literacy may intersect within the walls of a classroom, deepening children's understanding of phonemic awareness, phonics, fluency, vocabulary, comprehension and concepts about print. Chapter four will provide detail of these experiences through rich description of the methods, experiences, and techniques observed in both a kindergarten classroom and a music education classroom. Careful consideration of the data, as reported in the following chapter, provides a framework educators can use to meet the needs of young literacy learners today and in the future.

CHAPTER 4 - Results

Teachers seeking to make instructional decisions regarding effective literacy learning experiences for children must be informed of quality literacy opportunities that are available for young children. These decisions are made by studying connections between specific practices, attitudes, techniques and outcomes. Teachers who have been faced with the challenges and changes that have accompanied the No Child Left Behind Act must rely on current research to make informed pedagogical decisions. The purpose of this study was to discover and describe the way music is used in a kindergarten classroom in order to encourage and support early literacy learning.

This qualitative case study was conducted during the spring semester of the 2007 school year between February 15 and April 23, 2007. This study addresses the connections between music and literacy learning as discovered in the context of a kindergarten classroom and a music education classroom. Eighteen kindergarten children participated in this study conducted at an elementary school in a small midwestern community. The results of this study provided a framework for beginning to answer the first two questions which guided this study.

1. What types of instructional methods, experiences, and techniques occur in a kindergarten classroom to engage students in literacy learning?
2. How is music integrated within the context of literacy instruction in the kindergarten classroom?

This chapter provides a description of the rich literacy environment that was observed and five characteristics of effective instruction that emerged. These pedagogical qualities provided the structure for the literacy learning that existed throughout the school during the time this study was conducted. A study of the kindergarten classroom and the music classroom environments, instructional practices, and the engagement of the children in these settings have provided information about techniques found unique to each setting, as well as common methods shared between the two instructional settings. Examples of how these findings link to components of effective literacy instruction are provided and analyzed to determine connections between music and literacy (Appendix B-5).

In addition to observations, interviews provided insight regarding how a classroom teacher and a music educator view their roles as facilitators of literacy. Information gained from these interviews is integrated throughout this chapter to provide a deeper understanding of the literacy climate and instructional decisions that guided the methods, experiences, and techniques utilized during instruction. The final section of this chapter includes the ideas, thoughts, and voices of children to examine the perceptions they have regarding the use of music during the kindergarten instructional day. These interviews and observations provided information to answer the last two research questions:

3. How do a classroom teacher and music educator view connections between music and literacy practices of young children?
4. How do kindergarten children perceive connections between music and literacy experiences in the classroom?

Literacy Environment

Careful observation of the school environment provided a deeper understanding of the instructional setting that framed the children's learning opportunities. This school was nestled in the center of a small town, in the midst of established homes and close to the district's high school. The building was somewhat divided regarding physical space, with the gym, music classroom, teacher workspaces, and cafeteria at one end of the building. The office was the center hub of activity as one entered the school. The classrooms were found on two levels of the building, on both sides of the hallway. At the very end of the first floor hallway was an open door which led to Mrs. Miller's kindergarten classroom.

Kindergarten Classroom

The kindergarten classroom was very large and brightly decorated. It had the traditional feel of a classroom that was built with an understanding of the natural development of a kindergarten child, leaving room for students to move about. There was a wall of windows that had a door leading to the outside of the building. Two "child-sized" bathrooms framed either side of the room and were shared with a classroom that mirrored this one. The room was divided into areas that facilitated gross and fine motor skill development. The experience that this teacher had was evident in the amount of teaching materials and supplies that were organized within the walls of the classroom.

A bright rug championing colors, numbers, and letters established the boundary for the whole group meeting area at the front of the room. This area was supported with an easel and marker board used to display books for shared reading opportunities.

Manipulatives for all content area learning were well organized and easily accessible for

instructional use. Two reading instruction areas provided functional spaces for two guided reading groups to be operating at one time. These areas were placed in separate corners of the room, well distanced to allow for quiet instructional time. Mrs. Miller led one of the guided reading groups, and the other was led by a certified teacher, Mrs. Brown. Mrs. Brown had been hired as a full-time reading aide, and was in the room each day during guided reading instruction. The reading instruction was provided around tables that were at a height suitable for the typical kindergarten child, with sturdy child-sized chairs. The areas for small group reading instruction were well supplied with leveled readers and materials to support the teaching of reading, such as marker boards, magnetic letters, paper, charts, puppets, and letter stamps. A listening center, writing center, art center, alphabet center, and computer center were utilized during center time when children worked with partners. There was a “house corner” for dramatic play that was allowed during center time, as well as a science/ math discovery center. Under a table used for centers was a basket of red and blue foldable mats that the children had provided, allowing them their own space during rest time which occurred after lunch.

In the center of the room were two rows of tables that allowed the children to sit next to and across from their friends as they went about their work of drawing and writing. They had their personal items inside these desks and their coats hung on the backs of their chairs. The writings of children adorned the walls and labeled pictures of school personnel were looking out from the writing center, like an arsenal of willing helpers. These were models that provided children with names of those to whom they might want to write letters, or write stories about during independent writing time. The muted music of computer software at times could be heard above the activity in the

classroom as children went about their daily business. There were puzzles, electronic games, blocks, play-dough, and ample writing materials available. Items and supplies were labeled demonstrating the use of environmental print. On the wall was a manuscript letter frieze, a word wall with children's names, and posters to support the Animated Literacy™ program. Consonants, vowels, digraphs, blends, and diphthongs were all represented in written form accompanied with picture cues. Shelves held games, a multitude of books, and support materials to engage children in learning.

A large selection of big books was evident in several areas of the room. These big books were accompanied by large, colorful pointers placed nearby. Individual marker boards were available, as well as two large portable marker boards the teacher used during instruction. A rack for hanging book bags was out of the way, but accessible to allow the children to take responsibility for their own belongings. The children appeared to know where things were located and how to help themselves to the tools of their literacy learning (Appendix B-4).

The Music Classroom

The music classroom was at far other end of the same hall, just beyond the big glass doors and the office. It was not a large room when compared to the kindergarten classroom, but appeared well organized. Chairs were placed along the back wall, but were never used by the kindergarten children during any of my observations. A piano sat angled in one corner of the room to allow children to gather nearby on the floor. Two shelves of trade books were visible for the teacher to use during instruction. A large assortment of Orff instruments, both xylophones and metallophones, were angled in two rows in a corner of the room. The instruments were labeled, as were other materials

throughout the room, demonstrating again the use of environmental print. The Animated Literacy™ alphabet hung on the wall next to a music word wall of terms relevant to music education. A large, colorful, cloth world map hung at child level on the back wall, between a computer and the door that led to the stage and the gym/cafeteria, to be referenced during instruction. An area for whole group instruction stood ready with a portable chalk board which was at times used as a projector screen for the overhead. In a colorful crate were Boomwhackers™, tuned percussion tubes based around the C major diatonic scale. The crate was labeled to ensure that students knew where to return the instruments upon completion of their tasks. On the floor, in the center of the room, was a large black treble and bass cleft and register made with black self-adhesive laminate. Surrounding the musical register was a circle of notes attached to the floor. Half notes, quarter notes, eighth notes all danced in a wide, evenly spaced circle around the musical register to show children where they should stand or sit during their daily instruction. These specific areas of the room and this circle of music appeared to orient the children to their task of music instruction each day. Although instruction was not provided using a center format, the room was defined by tasks that occurred during the instructional period (Appendix B-5).

Characteristics of Instructional Practice

Through analysis and coding of data obtained from observational fieldnotes, videotapes, and interviews I identified five characteristics that guided instructional practices throughout the school. The five structures which emerged from this extended time of study included: 1) caring; 2) conversation; 3) connections; 4) collaboration; and

5) consistency. These five characteristics were reflected in guided instructional methods, experiences, and techniques that were evident in both identified classrooms.

A demonstrated climate of *caring* between teachers and students allowed for rich *conversations* to be held that served to facilitate oral language development.

Conversations provided opportunities to *connect* new learning to authentic situations in the lives of the children. As teachers *collaborated* with one another, *consistency* in practices and routines provided a foundation for quality instructional practice.

Figure 1 : Literacy/Learning Environment



Caring

An environment of caring provides children to be secure in taking risks, risks often necessary for learning to occur. Staff members, teachers, and children interacted with one another in respectful ways to establish an environment of caring. The school's hallway greeted visitors with words written upon brightly colored blocks on the wall; respect, responsibility, citizenship, personal growth, relationships, self-discipline, conflict resolution. These cheerfully painted blocks were written at eye level for adults. They may serve as a reminder of the dispositions to be modeled and reinforced within this school. Farther down the hall, there were pictures of each student and below the pictures were cards identifying each child by first name. The children peered from their pictures, smiling. Attached to the photographs and names were samples of work children had completed. This allowed the children to recognize work that belonged to their friends, even if they were unable to read names.

Staff that interacted with the children did so using first names, and appeared to warmly greet families visiting in the building. I was treated with a smile and a greeting each time I entered the building. The school secretary knew parents by name and appeared very happy to help those who had questions. The substitute teachers that I came in contact with were very familiar to the children. The same substitutes were used often and they knew the children by name.

Teachers in this building greeted children with smiles and most children freely offered smiles in return. Shawn, however, was not so quick to return a smile on some days. He was a child who was repeating kindergarten and had struggled with issues at home. His bright red hair and his freckles drew an observer's attention to him. At times he chose not to participate in the activity of the day, taking on an attitude and posture of

pouting. However, he frequently presented his teachers with little hand-cut snowflakes or pictures. They welcomed his artwork with smiles and always made sure to thank him and carefully tend to the special gift they had received from him. I knew I had made it to his circle of friends when, I too, received a red snowflake after a few days of observation. As the weeks of observation passed, Shawn participated more frequently and pouted with arms crossed less frequently.

My first day in the school, I was greeted by Miranda. She smiled and waved to me as I entered the classroom. She wore a long flowing pale pink dress and black boots. Shortly after I entered the room the children began to work at their centers. Miranda gave a friend a big hug and when she saw me observing her display of affection said, *we always do that (hug), because we're friends in here!* Brandon was a student who had been diagnosed with an anxiety disorder in addition to autism. He was assisted at all times by a para-professional. She appeared to instinctively read his moods and quickly responded when disruptive behavior escalated. Her kindness and compassion appeared to be a lifeline for him. He was also accepted and supported by his peers. They enthusiastically cheered when he was able to participate in a voice recognition game in music, while they waited patiently for him to share his writing during class. They seemed to not mind at all when he sat in his special red chair or didn't fully participate to the extent that they were required. They were capable of not attending to his outbursts, yet celebrated his victories. While waiting in the hallway, Lindsey, a kind, sweet child, allowed him to give her a big hug. She smiled and happily stood next to him in line. Ms. Grant, his para, thanked her for being such a good friend to Brandon.

There was an environment of caring that permeated the school. This was evident through the respect shown by the staff to parents and visitors within the building and was also demonstrated through positive and supportive interaction between administration, staff, and teachers. This respectful climate was modeled for children and the children then demonstrated a sense of caring and responsiveness toward one another. Caring interactions often resulted in conversations.

Conversations

A caring environment led to invaluable, rich opportunities for conversations that supported early literacy learning. These conversations were held at two levels throughout the time I conducted this research and both led to the development of strong oral language skills. Conversations were held between the teachers and the kindergarten children, but also encouraged and allowed between children. The teacher began each day by engaging the children in conversation as they entered the classroom. She asked them questions about what they had done on their way to school, and appeared to attend to what activities they were involved with outside the school day. They would respond and often asked her about what was going to occur today. Conversational skills were further put into practice when asked about family members. They shared with her if their grandparents had been visiting and they discussed who had been listening to them read the night before, as she stamped their independent reading journals. One morning as I took my place in the back of the classroom, Makayla came over and hung up her backpack. She then looked at me and said, *how was it?* She must have read my puzzled expression and added *did she win?* I realized she had remembered the last time I had been at school, two days earlier, I had told her that after school I was attending my

daughter's track meet. She didn't know what that was, so I had explained about my daughter running races and throwing a javelin and how they would see who could run the fastest and throw the farthest at the meet. She had not only greeted me that day, but engaged me in meaningful conversation.

Both teachers used conversation during instruction to inquire what strategies the children were using in their learning. For example, they discussed the strategies used for decoding words, what their thoughts were during picture walks, what they thought of when they heard a certain type of music. Rather than a barrage of questions, these inquiries took on the form of a two-way conversation. Children were listened to and respectful responses made and expanded upon. Although there were whole group instructional times where children were asked to raise their hands to share, many of the oral language experiences present in this classroom were in the form of large or small group conversations, without the formality of a teacher calling on one chosen student for response. For example, the following conversation occurred during a whole-group read-aloud of a book by Lachlan, entitled *It's the Weekend!*

Mrs. Miller: *I want you to notice something in the pictures that you hadn't noticed before.* (This book had been read two days earlier and this purpose for re-reading was set)

Carl: *I see a receipt, you know, what you get when you pay.*

Mrs. Miller: *I wonder where you could get a receipt here in our town?*

Ben: *You can get those at the grocery store.*

Mrs. Miller: *How about those signs? (Billboards from the illustration) Why do you think it would be important to have a sign like that?*

Michael: *Hey, those movie signs...you need to read those signs to know what time the movie starts.*

Mrs. Miller: *So sometimes words can tell you a story that is fiction and sometimes the words tell you information that you need to know.*

These opportunities for conversation were not only shared between adult and child, but children were encouraged to engage in conversation with one another. Mrs. Miller had established that children were to attend centers with one partner. That practice appeared to allow for oral language interactions in all areas of the room, while keeping the noise level relatively quiet during instructional time. Children were also allowed to share their ideas and seek help from their friends during independent writing times. Instruction often appeared to be driven by conversations and decisions reflected that the children were listened to. Mrs. Miller used the children's interests as expressed through their conversations when she selected books to be read. These conversations regarding what was important to the children, built critical oral language skills and led their teachers to make connections between the lives of the children- and what was to be learned. Center time provided children with an opportunity to engage in conversations of personal interest with one another. Ben and Carl were working at the writing center independently when I came over to observe what they were doing:

Ben (to Carl): *Hey look, I know how to write Daddy. I'm going to give this to my Daddy.* (It is spelled correctly and Carl looks at the word.)

Carl: *I'm just writing this word* (He is copying the word Monday and the number five from the calendar). *I'm going to give it to Ms. Lyon in music.* (He begins to

draw a picture with several circles (it appears there are pizzas and people in the picture). *I like pizza and I think we're having pizza at lunch today.*

Conversations were encouraged as a way to facilitate learning throughout the instructional day connecting children with each other and academic content.

Connections

Learning was facilitated as children used conversation to make connections to prior knowledge, building schema, connecting their prior knowledge to their new learning. Connections were also facilitated by teachers who connected learning experiences to people and places in the community and helped children see connections between what they were learning and their previous experiences with books and songs. The conversations provided opportunities for a bridge to form between what was known to what was new. Conceptual and linguistic understanding was assessed prior to read-alouds, guided reading lessons, and directed teaching opportunities to enable the teachers to make meaningful connections during instructional moments. These connections presented themselves during explicit decoding strategy instruction as well as during lessons that were designed to build comprehension skills.

At an explicit level, Mrs. Miller used the names of the children to provide examples of decoding strategies she was teaching. As the children learned that the letter **y** can make the sound of /ē/, the connection was provided through an example of a child's name, Mary. The children learned that vowels can have multiple sounds in words. The children then began to make connections independently. This was demonstrated during the reading and discussion of Brenda Parkes' big book, *Kakadu Jack*. While reading a

page of the story which discussed papaya, a child announced his discovery that in that word the letter **a** made the sound of /ā/.

Connections were also facilitated through the use of thematic planning. Both teachers provided themed instruction allowing all curricular areas to be integrated in the learning process. As the children were learning about farm animals they learned about the /ē/ sound in the words hen, egg, and fence. They read books about hens and watched a chick hatch from an egg. The children wrote stories about hens and used farm animals as the topic of their math work. The use of expository and narrative texts supported this thematic teaching and provided opportunities for students to build conceptual and linguistic understanding.

Connections were often made between what the children were learning and the community in which they live. Gathered on the rug, the children compared and contrasted two versions of the folktale, *The Little Red Hen*, one by Paul Galdone and one written by Janine Domanke. As the teacher led the discussion, she built vocabulary telling the children that as she read this story it reminded her of the Dutch Mill in their town. She then expanded on what they knew of their town's landmark. As the librarian shared two books with the children regarding taking care of the environment, singing songs about re-using, recycling, and reducing the amount of waste people produce, they discussed their city pond and park and what they could do to keep it clean and safe. As the music educator introduced the theme of gardening for their spring program, she discussed with the children what they had seen in their own gardens and discussed the highly attended tulip festival that occurred in their own town each spring.

The children benefited from the modeling of making connections. They then made connections for themselves, as evident in group discussions. Mrs. Miller introduced Joy Cowley's book, *The Farm Concert*, by asking what the children knew about concerts. Lindsey was able to tell the children about her big brother's concerts. She shared that you had to dress up and it was like giving a "show." Mrs. Miller then extended the connection by asking the children how animals might give a concert...what might a farm concert look like, or sound like. The children continued to make connections with what they knew as they made predictions regarding the text. When preparing to read a story about a parade, Mrs. Miller led the children on a picture walk and discussed parades they had watched or participated in. She encouraged them to talk about the 4th of July parade that occurs in their town, leading them into a conversation to note the problem in the story and a solution they might discover during their reading.

Connections were used as a valuable instructional tool. In the classroom Mrs. Miller often connected what the children were learning to past experiences that they had, and sometimes those experiences involved texts that they had read. When reading *Whose Baby* by Jason Amber the children and Mrs. Miller shared this conversation:

Mrs. Miller: *Can you think of something that when it's a baby looks totally different from its mom?*

Miranda: *An ostrich?*

Mrs. Miller: *Well, that would still look pretty much like its mommy, just smaller.*

Billy: *A frog?*

Mrs. Miller: *That's right! A tadpole looks totally different from its mom. Some babies grow and change in many different ways. Let's think of the Eric Carle book we read last week. (The Very Hungry Caterpillar)*

Michael: Oh yeah! The caterpillar!

(The children continue to discuss how the baby caterpillar changed from egg, to caterpillar, to butterfly.)

Students also demonstrated that they were making connections in the music classroom. As students learned to play a song on their metallophones and xylophones, Ms. Lyon asked them why they needed to look at the marker board instead of their instruments. *We have to read it* was the response from a child. Having made a connection between reading text and music, Nathan commented that he knew how to play those kinds of notes on the piano, making a connection between music instruction at school and his musical opportunities at home. Another example occurred when Ms. Lyon wanted to help the children remember which notes to remove from the musical scale when preparing to play the song "Starlight, Starbright", a traditional folksong, Ms. Lyon had the children associate the notes B and F with 'burgers' and 'fries' making a connection to something they knew as going together which shared the same initial consonant as the note to be removed. These connections enhanced instructional practice and collaboration provided additional opportunities to connect within the school environment.

Collaboration

Collaboration allows individuals to work together, pooling resources, to increase the effectiveness resulting from effort expended. Evidence from this research

documented that collaboration occurred at three distinct levels: the community, the district, and the school. Collaboration allowed for resources and efforts to be joined, effectively meeting the needs of students.

Collaboration with community members was evident in the Grandpal program which was in place and matched senior citizens with classrooms. The gentleman that worked in this kindergarten classroom offered his presence regularly each week to work with the children on their reading. He listened to them read and talked with them about what they had just read. Community members were also involved by providing presentations in order to share their own experiences with the children. A scientist provided a power-point presentation of his research on volcanoes in Antarctica. His presentation was focused on what kindergarten children would find interesting and he engaged the students with photographs and stories of his work. Parents also offered their expertise. A student's family who owns an auctioneering business provided an auction for the children. The children had learned about coins, singing songs of their value, and reading books about basic concepts of economics. The family of the student then held an auction, providing each child with a small amount of money which allowed them to participate in the process. They then held a discussion about the strategies of spending, saving for one nice thing, getting several smaller things, and waiting patiently for a chance to get a 'good deal'. These opportunities for collaboration with community members served as additional resources for the instructional program.

Collaboration was supported at the district level through continued professional development of the teachers. Teachers often attended professional development sessions together. For example, all kindergarten teachers attended a kindergarten conference

together to be able to share in common conversations about what they had learned.

Professional development was encouraged and teachers were provided with opportunities to visit successful classrooms and collaborate with other professionals who could offer insight and guidance as changes were made to improve their existing programs.

At the school level there was an afternoon each week devoted for collaborative planning at each grade level. It was during this meeting that intentional planning occurred to integrate the curriculum through thematic teaching. This was a scheduled opportunity for all six kindergarten teachers to pool resources, thoughts, and reflections regarding previous teaching and upcoming lessons. The leadership of this meeting was shared, with teachers being assigned dates when they were expected to provide an outline for a specific week of instructional planning. This document included the big book recommended for shared reading during the week, Animated Literacy™ units that would align to the big book. Also included was a listing of optional Animated Literacy™ drawing lessons, and designated word study components that were to be targeted. The leader included an outline of possible materials and resources that would be available during instruction.

The planning document identified the math thematic unit that would be integrated with literacy learning as well as science concepts that would align with the thematic unit. Special notes, such as reminders for assessments, dates for special guest speakers, field trip information, as well as upcoming events were provided in this document (Appendix B-7). Although an assigned teacher would bring this document to planning, a week and a half prior to the implementation date, all teachers discussed it and provided additional thoughts and suggestions prior to finalization of the plan. This collaboration allowed for

materials to be shared and matched to individual classroom needs. These meetings occurred in a conference room. The principal supported these shared decision making sessions and was present for part of the planning session on the day I chose to attend. She offered information to the discussion as well. It was during this meeting that I was able to note that the math series this district uses has a strong literacy component and trade books are used to support the teaching of math each week.

A plant unit was a topic for discussion during one of the meetings. This was designed to meet the teachers' curriculum objectives and was also the theme of the kindergarten music program to be rehearsed during this time. The unit was identified as a spring science unit with the unit goal to determine what plants needed to grow. For each of the five objectives listed there was a short list of four to five vocabulary words, a big book to be used to teach the science content, and emergent leveled books that would provide opportunities for student reading. The unit included other trade books, songs, finger plays, and other resources such as videos/DVDs, manipulatives, games, art opportunities, and activities/experiments that would facilitate the teaching of the objectives (Appendix B-7).

Some of the collaborative ideas that were shared included music, such as a song entitled *Green Plants* that was sung to the traditional tune of "Row, Row, Row Your Boat". This song incorporated the teaching of the first unit objective (to identify what plants need to grow) with rhyming words taught to a familiar tune. Another song, entitled, "Parts of a Plant" was to be sung to the tune of Daltrey's "The Wheels on the Bus" and taught the vocabulary needed to understand the various parts of a plant. There were four verses which examined roots, stems, leaves, and flowers. A game/song entitled

“Plant-Part Pokey” suggested engaging children in singing about the parts of plants, while reinforcing the concepts of prepositions and directionality.

Grade level teachers were provided with scheduled opportunities to collaborate with the art, physical education, and music teachers in scheduled meetings once a quarter, although some provided additional information through e-mail or informal conversations during the school day. This offered opportunities for integration of the curriculum to extend to all parts of the school day. The art teacher, knowing that the children were doing a “Clifford” book study, planned a watercolor lesson on painting the character Emily Elizabeth. The librarian shared information about celebrating Dr. Seuss and encouraged the music teacher to teach a song about Dr. Seuss. Mrs. Miller read and discussed various Dr. Seuss books within the context of meeting her reading objectives. At the conclusion of this unit of study, parents were invited to come in during an evening and share a night of reading Dr. Seuss books with the children while enjoying cookies. They also shared in a choral reading of *Dr. Seuss’ A,B,C* and listened to a short biography of Theodor Geisel, Dr. Seuss.

The school provided a mentoring program for new teachers and through that opportunity Mrs. Miller and Ms. Lyon were paired to observe one another. This partnership allowed for each teacher to develop an understanding and appreciation regarding each other’s teaching styles and techniques. Once each quarter, they were required to watch one another teach and then engaged in conversations regarding what occurred during the teaching/learning cycle. During the interviews I conducted with Mrs. Miller and Ms. Lyon, it was noted by each of them that they valued the opportunities they had to collaborate, but felt that additional time to collaborate would be beneficial. Ms.

Lyon stated that the children would benefit if she could find a way to be included in the weekly planning that grade level teachers were provided. She recognized that it would be difficult to schedule that opportunity, but stated that even a brief amount of time would be very beneficial. Mrs. Miller, when asked about opportunities to collaborate with the music educator, noted that during the team planning days the children were with the music, gym, and art teachers and identified that as “one big drawback” because it prevented those teachers from attending the scheduled planning sessions.

Additional collaboration was noted between teachers and parents. Teachers collaborated with parents through both written and oral communication. Parents were asked to sign their child’s reading log each evening, documenting how much time was spent listening to their child read. They were provided with notes identifying good strategies to use to help their children as they read independently at home. This hand-out also included eight specific suggestions to support reading instruction skills related to concepts about print that children need to know to be successful readers (Appendix B-8). Collaboration between the school and community and collaboration at the district and building level established a strong support system to enhance the children’s learning experiences. These opportunities for collaboration led to consistency in pedagogy.

Consistency

Opportunities for collaboration allowed for teachers to approach instruction with a shared vision of instructional expectations. This consistency appeared to be determined from a shared understanding of what good instruction was and a respect for order and organization. The school had chosen a guided reading model for reading instruction and supplemented that with Animated Literacy™. Building-wide training was provided for

guided reading with a consultant that continued with the district for an extended period of time. The reading aides attended the same professional development that classroom teachers attended. This consistency of practice was evident through common elements that could be seen in the classrooms. Environmental print, especially labeling, occurred in the gym, as well as in the music classroom and the kindergarten room. The Animated Literacy™ posters were displayed in clear view in all three locations.

The classrooms ran on a schedule that did not appear to be inflexible, but was adhered to out of what seemed to be respect for other professionals in the building. Students were given time to use the bathroom prior to music and arrived on time to allow for the entire period to be used for instruction. Clear expectations were provided through oral directions and routines. When asked to sit behind an Orff instrument, children knew how to file behind the instruments, moving down to make room for all of their friends. They knew the protocol for sharing their instruments and the expectation for taking turns.

The kindergarten classroom provided the children with a sense of routine. This oriented the children throughout the day, allowing them to anticipate what they were to do next. Songs were used to establish part of that routine. The children came in the classroom, hung up their bags, and began to sing “Rise and Shine.” This was followed by a “Days of the Week” song, followed by a rhythmic favorite called “Macarena Months”. With each passing song, the children became more physically engaged. Without being told, at the conclusion of that song, they sat on the rug in anticipation of the morning calendar activities.

In the kindergarten classroom the children sat at ‘listening spots’ on the rug. Books were read for pure joy, and examined at length. Re-reading was a common

experience for them. Children did not comment that they had read a text before; they appeared to expect the re-reading of text for different purposes. Whether the librarian, music educator, classroom teacher, or counselor shared a story, there was time given for discussion and vocabulary building as needed to make sure all children had access to the material. Teachers appeared to be cognizant of pausing on any word they felt needed clarification for better understanding.

Summary

From careful analysis of the data five characteristics of an effective literacy/learning environment emerged. Each one of these critical characteristics supported the continued growth of young children engaged in the task of early literacy learning. The children were nurtured in a caring environment, and challenged through thoughtful conversations. Teachers continued to strive to make connections that reaffirmed for the children a clear purpose for learning. Through collaboration and consistency, the school and community members worked together to build a challenging-yet secure environment for young learners to thrive.

Intersection of Practice in Music and Literacy

Analysis of data collected during this case study indicated that there were practices, techniques, and materials that were common between the kindergarten classroom teacher and the music educator. Those pedagogical practices included: 1) a gradual release of responsibility; 2) use of metacognition; 3) sharing of quality children's literature; 4) development of oral and written language; and 5) active engagement in learning/gesturing. Analysis was provided of materials and types of grouping used during literacy instruction. Specific literacy learning events were analyzed to identify

how they were linked to phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print (Appendix B-3).

Gradual Release of Responsibility

Gradual release of responsibility (Pearson & Gallagher, 1983) was evident during classroom instruction in both the kindergarten classroom and the music classroom. This was demonstrated through the process of skillful scaffolding. Explicit teaching was provided, as was child-centered exploration of literature. In both classrooms teachers were careful to model desired outcomes for children. Support was offered as individual children required more direct instruction. Ample opportunities were provided for children to apply what they had learned prior to being asked to demonstrate their mastery independently.

The classroom teacher, when drawing the children's attention to the /at/ phonogram read the child several examples of text using rhyming words with the /at/ chunk and provided discussion to focus the children's attention to the use of that specific rime. The teacher then asked the children to participate in a guided writing activity, where together as a class they generated words with the /at/ rime. The words were written on a chart and read to determine if they rhymed with the word hat. The children then transitioned to their tables to write their own flip book of words containing the /at/ rime. The flip book was shaped like a hat to remind the children of Dr. Seuss' *The Cat in the Hat* book which had been read to them. As the children began to write independently, the teacher removed the class-generated list to encourage the children to work independently. The teacher circulated around the room to offer additional support to those that needed it to be successful with the activity.

Release of responsibility was also evident in the music classroom. Upon entering the music classroom, the children were asked to get two colors of Boomwhackers™ and go to their places on the floor. The overhead projector displayed a musical score with color coded marks that determined which colored instruments would play at certain times. Under the color coded dots were the letters of the notes, G & E. The children played as they sang the tune while saying the names of the letters. The children then took their places behind the Orff instruments. They played the song while looking at a marker board. On the marker board was the rhythm indicated by notes with the letters under the notation of rhythm. By the end of the session the children were playing and singing the words to the song. Through explicit teaching, demonstration and modeling, the students learned to play the melody and sing the words to a new song. The teachers demonstrated the use of thoughtful scaffolding to challenge students while providing needed support until the children were capable of working independently.

Metacognition

Both teachers in this study used the technique of mental modeling when working with their students. The teachers conducted ‘think-aloud’ events which provided students with a framework for thinking about their own learning processes. Mrs. Miller facilitated discussion when comparing two texts, such as different versions of the traditional folktale *The Little Red Hen*, or two versions of a cumulative tales, such as Tabacks’ *There Was an Old Lady Who Swallowed a Fly* or Lucille Collandro’s *There Was an Old Lady Who Swallowed a Shell* to encourage the children to think deeper about the story elements. To model her purpose for reading, Mrs. Miller told the children that she likes to compare the two versions of the same story: *I think, hmm, how are these stories the same? I wonder*

how these stories are different? I am thinking about who the characters are in the story we read earlier... Boys and girls, when I come to a word I don't know I think...what could that word be that would make sense and start with /g/?

Ms. Lyon used think-aloud events as well to help the children engage in the songs they were going to sing. She told the children they were going to be working on a program called "How Does Your Garden Grow." As she introduced the topic she said, *Hmm, I wonder what our program might be about? I'm thinking about all the things I might be singing about in a program about a garden....what kind of things would I want in my garden? (Children respond with their ideas) I'm thinking....what are some things I don't want in my garden? (Children respond with their ideas)* She then proceeded to introduce vocabulary words they would need to understand the song they would be learning.

Sharing of Quality Children's Literature

Children's literature was used in the context of instruction in both the kindergarten classroom and music room. Books were displayed throughout the kindergarten room and the theme of the day was represented through literature that appeared on the easel situated at the front of the room. The children were exposed to six to ten books daily. While nearly all of these books were shared by Mrs. Miller, books were also shared by Ms. Lyon, substitute teachers, the high school aide, the school librarian, and the guidance counselor. Of these books, one or two were read independently during their guided reading instruction. They were provided with an opportunity four days a week to go to "open library" in order to check out library books to take home or to read independently during rest time during their day.

Mrs. Miller frequently used big books during whole group instruction. The same big book would be read and re-visited with different purposes and objectives for each re-reading. The initial reading would generally focus on comprehension and a shared discussion of the story elements. Subsequent readings would be accompanied with mini-lessons on phonics, vocabulary, or concepts about print. She also shared an Animated Literacy™ suggested text daily. It was often used to introduce a specific phoneme that the children were studying. The text often was used as a foundation for a modeled/interactive writing lesson prior to an independent writing activity. Mrs. Miller stated that she averages three big books and three additional trade books weekly to support the district's social studies and science curriculum. She also reported that she used at least one text per week to support the district math curriculum. Varying genres were shared with the children and she often discussed the illustrations with the children, commenting on the use of pictures to help in comprehending text. Mrs. Miller exposed the children to expository texts, both during whole group instruction as well as during guided reading lessons. Often children would choose to examine expository texts during their independent reading time.

Books chosen by Mrs. Miller often had unique features. Several of the books shared were flip-books, or books with cut-away features, or unique page design such as Eric Carle's *The Very Hungry Caterpillar*. Other books included flaps to be lifted, or unique fold-outs, such as Jason Amber's *Whose Baby* that engaged the children in a 'game-like' reading experience as they searched for the baby who went with the adult animal. She highlighted these features and took time to explain for the children other features of the books they read, such as graphs, charts, an index, or table of contents. She

let the children explore books that had textures or other unique graphic features. Several times she shared song/story books that were written to be shared through reading *or* song. Some of these books included musical scores as a feature of the book. She shared those books by modeling the song as she began the book and the children would join in after a few pages. One book was shared with an accompanying cassette, but typically she would model fluent reading through her expression, not by using tapes.

When borrowing books from the school library, many of the children chose expository texts. Books on animals and sports were frequently read during their independent reading time and they especially seemed to enjoy photo essays. Interview responses with the children regarding the types of books they liked to read included the following:

Bobby: *I like to read about karate- see, I have it on my shirt too.*

Ben: *I like to read about cars.*

Amanda: *My favorite book is Playing Outside. That is a book I had in my reading group.*

Researcher: *You like your reading group books? What do you like about those?*

Amanda: *Because they are like real, it could happen. You learn what is real.*

The pictures are real pictures.

Miranda: *I like ponies, and horses, and eggs, and Easter books.*

Literature was shared in the music classroom, although not daily. Some books shared had a general theme of music appreciation and others supported the topic of songs the children would be learning. In advance of the Dr. Seuss celebration, the book *My Many Colored Days* was shared and discussed. Some of the books shared were

song/story books which could be read or sung, such as Iza Trapani's *Twinkle, Twinkle Little Star*. Other books such as Bridwell's *Clifford, We Love You*, had a musical score included at the conclusion of the narrative story as an additional feature of the text.

Oral Language Development

Children were provided multiple opportunities to strengthen oral language skills. Large portions of instructional time were spent in whole group settings rich in teacher facilitated discussion. Children were encouraged to talk about their thoughts, ideas, and strategies used in learning. Mrs. Miller asked the children to clearly articulate how they solved problems they encountered when reading text. As the children participated in guided reading lessons the teacher often asked, *how did you figure out that word? What did you use to help you understand that sentence?* Often children were engaged in picture walks prior to reading that provided opportunities for prediction of the story. Vocabulary instruction was provided prior to the reading, but more often was provided during the reading of the story. The teacher often paused to clarify word meanings and the students themselves stopped the teacher when hearing a word they didn't know to ask her for the meaning. When reading Carolyn Otto's expository text *Spiders*, Mrs. Miller stopped when sensing confusion regarding the word orb. The type of spider explained in the book was an orb spider. Upon hearing the term orb Bobby asked what that word meant. Mrs. Miller explained that an orb is another word for circle- and the orb spider weaves 'wheel shaped' webs. After the children developed their vocabulary through oral language opportunities they were then prepared to transfer what they rehearsed orally to a story. Below are several of the stories written at the conclusion of the reading of the expository text on spiders:

Gabriella: *A spider is black. A spider can make webs.*

Amanda: *Spiders liv every wer. Don't get to clos to spiders. They have eight eyes and eight lages too.*

Jamie: *A spiders lefs idr wder spoders et grasjpprs spiders haf eight eyes.*

Ben: *A Spider can eit ulr spiders. A psider is balck. A spider is noir.*

Makayla: *I have a spider. I don't like spiders Do you like spirs?*

Nathan: *Spiders live everywhere. Spiders canlive underground.*

Ellen: *Spiders can mac webs. Spiders can haf eight lags.*

Lindsey: *Spide don't lev by my has. I spira (spray). I kyld the spidr.*

Kaily: *Spiders liv in the code (city) and cunchr (country).*

These representations of understanding were scaffolded by text and oral language experiences. Children were able to demonstrate their understanding through oral and written communication.

Active Engagement in Learning/Gesturing

Children were actively engaged during literacy instruction through various experiences. Kinesthetic movement was a planned part of instruction in both classrooms. In the kindergarten classroom, three songs were generally shared routinely at the beginning of the day. One song, "Rise and Shine", had a few hand gestures and the children were led in the changing of volume with each verse. The gist of the song was:

Rise and shine and welcome to school today- we're so glad you're here.

The second song of the morning was often a song, entitled, "Days of the Week". This song, written by Dr. Jean Feldman, was to the theme song of a television show, *The Adams' Family*. After a phrase the children would snap their fingers twice. The children would then recite the days of the week in order beginning with Sunday. The children

appeared to enjoy snapping the syncopated rhythm. The third song generally used each morning was a song called “Macarena Months”. This song required not only that the children stood away from their desks, but they did large arm movements that required them to cross mid-line, promoting bilateral coordination. They also touched their shoulders, heads, and hips, turned around and jumped. This song was noted as a favorite of several of the children during the interviews. The children nearly all (with the exception of Brandon) participated in this song with smiles and energy.

Active engagement was provided without the use of music in teaching literacy as demonstrated by the teacher having the students wear letter cards about their necks as they spelled consonant-vowel-consonant words and identified the short vowel sounds. Mrs. Miller also had the children act out texts and chants, such as small group dramatizations of *5 Little Elves* when working on the /ě/ sound.

The most common use of gesturing was the Animated Literacy™ gestures which represented various phonemes. These gestures were observable during whole group instruction, guided reading lessons, and independent writing opportunities. The gestures provided a clear physical movement for each phoneme, and were represented on posters displayed in both the kindergarten and music classroom. Direct instruction of these gestures had been provided during the first semester of the school year. The use of gestures was initiated by the teacher as well as the students. As a review of these gestures, the teacher would occasionally use Animated Literacy™ flip charts and ask children to say the sound while doing the gestures. Review also was provided during the singing of a song, “Who Let the Letters Out?” As children participated in independent writing experiences they could be seen gesturing when they tried to determine what to

write on their paper. It was clearly evident that some of the children relied on these gestures more heavily than others, but the use of these gestures was a continual presence during daily literacy events.

Other gestures that provided clues to meaning were used by the classroom teacher and the music educator. Mrs. Miller would ask the children to show her the meaning of a word by acting it out. The children, in reading the word 'all', would throw their arms out to their sides in an exaggerated motion to symbolize all of something. The children also would gesture the American Sign Language T, to use the bathroom when the teacher was engaged with small group instruction. Fingerplays were often used to re-focus attention and incorporated the use of hand gestures to enact the meaning of the quick poem:

Open-shut them, open-shut them,

Do a little clap,

Open-shut them, open shut them,

Lay them in your lap!

The music educator often used gestures in the context of instruction each day. When the children were examining the pitch of a song as they became familiar with the melody, they often raised their hands higher (touching their heads) for a higher note, and then lower (touching their waist) when the melody called for a lower note. Children would use gestures to depict the meaning of words within a song they had learned. For example, *Digging spuds from the dirt, lots of mud on my shirt* called for the children to pretend to dig with a shovel and then pretend to wipe the front of their shirt.

The children were also actively engaged in playing instruments. While playing Boomwhackers™, the children held the tube in one hand and struck it on their other

hand. When playing Orff instruments they were instructed to hold their mallets as if they were “riding a bike” (all students pretended to be holding handlebars as they held their mallets). Children were provided opportunities to respond to various types of music by moving their bodies. They were asked to listen to lyrics and follow the directions given in the context of the song, pairing their listening skills and their imaginations. They were provided the opportunity to learn a short square dance, complete with a bow, curtsy, and a do-si-do.

The use of gestures appeared to take on a “game-like” quality for the children. The children had a high level of participation during these experiences. Many shared during their interviews that their favorite experiences were the musically integrated experiences, such as the singing of “Macarena Months” that were accompanied with opportunities for large motor movement and hand actions. The children indicated that they connected music with movement.

Materials Utilized During Instruction

Materials used by the classroom teacher and music educator were at times unique to each classroom setting, yet many materials were found to be used in both settings. The kindergarten classroom was extremely large, allowing materials to be out and accessible to the children at all times. Materials were often color-coded to allow children to manage them independently. The music classroom was smaller and was used throughout the day by kindergarten, first and second grade children. Children’s literature was evident in the music education classroom, but was for use by the teacher and therefore not accessible to the children. Materials were often put away between classes or moved depending on the daily instructional objectives. Mrs. Miller and Ms. Lyon both used materials that allowed

children to view teacher modeling and demonstration. Table 6 provides a list of materials typically used during daily instruction. The columns provide a listing of materials used uniquely in the individual classrooms as well as a column listing materials commonly used by both educators (Appendix B-9).

Table 6: Materials Utilized by the Classroom Teacher and Music Educator

| Classroom Teacher | Music Educator | Both |
|------------------------------------|----------------------------|----------------------------|
| Animated Literacy™ cards/ sheets | Costumes | Marker board |
| Leveled readers | Orff instruments | Pointers |
| Illustration/ construction paper | Boomwhackers™ | Map |
| Markers/ crayons/pencils | Overhead projector/ screen | Word wall |
| Flashcards of high frequency words | Piano | Children’s literature |
| Manipulatives/ math & reading | Props/ program | Music CDs |
| Kiwi Bags™ | | Animated Literacy™ posters |
| Calendar | | Assessment checklists |
| Puzzles/ games | | Video to support content |
| Pocket charts/ sentence strips | | Computer |
| Scholastic Magazine | | Environmental labeling |
| Cassette Tapes/ books | | Puppets/ stuffed animals |
| Big books | | |

Context for Instruction

Learning is often facilitated by the context of instructional setting provided during a planned literacy event. The data collected during this study identified that both the classroom teacher and the music educator provided the majority of instruction using a whole group setting. The music educator chose to use whole group instruction for presentation of the large majority of the identified instructional events (84%). She did not provide instruction through small group settings or use centers for instruction. The use of partner work (13%) appeared to most often occur due to the necessity to share instruments. Independent work (solo work) instruction was done infrequently (3%).

The classroom teacher, using whole group instruction for half (51%) of the instructional events, utilized small group/guided reading and independent work for most of the other instruction during the day (24% and 22% respectively). Intentional partner work and center time activities, although utilized throughout the day, did not provide for interaction with the teacher, but provided the children with an opportunity for self-guided learning.

Table 7: Context of Reading Instruction

| Educator | Whole Group | Guided Reading/Small Group | Independent Practice | Partner Work | Center Time | Total |
|--------------------------|--------------------|-----------------------------------|-----------------------------|---------------------|--------------------|---------------|
| Classroom Teacher | (50) 51% | (23) 24% | (21) 22% | (1) 1% | (2) 2% | (97) 100% |
| Music Educator | (31) 84% | (0) 0% | (1) 3% | (5) 13% | (0) 0% | (37) 100% |
| TOTAL | (81) 60% | (23) 17% | (22) 16% | (6) 5% | (2) 2% | (134) 100% |

Music as in Instructional Tool: General Content

Music was used throughout the day in both the kindergarten classroom and the music education classroom as a tool for learning. Music was used to assist children in transitioning to a new activity with limited loss of instructional time and was used consistently to deliver content information to children in all curricular areas.

Transitions

Music was utilized by the classroom teacher as a way to provide transitions to new activities throughout the day. Upon singing the last verse of “Macarena Months”, the children knew to go to the rug area to begin their calendar activities. When they were lining up to go to recess, music, or gym they would often sing a short teacher-made song to review a concept they had been working on earlier in the day such as “Old McDonald Had a Vowel, A,E,I,O,U”... Music was used to transition from the first half of the day to the second half of the day. Following the morning instructional period the children would return from lunch for a short rest period. Red and blue mats were placed around the room by a designated helper and the children would get 2-3 books (if they desired) and lie on their mat. Mrs. Miller would put on instrumental music during this time of the day. One CD provided calming variations of “Twinkle, Twinkle, Little Star” which were arranged by John Tesh, while on other days the children listened to “When I Wish Upon a Star” from a CD that featured lullabies written for Walt Disney movies. These allowed the children to rest and relax after lunch and recess and transitioned them into the second half of their day.

Teaching of Curriculum Content

Music was used in the teaching of conceptual understanding in all curricular areas. Children were provided content information in math, science and social studies through the use of song. The songs were used to both teach and review content and the repetitive nature of this task appeared to help the children retain the information they had been taught.

While learning about the value of coins the children were invited to the rug and given a small bag which contained real coins- a penny, nickel, dime, and quarter. They then took out the coins and discussed the attributes of each. As they sang a song to the tune of the traditional western folk ballad, “Oh My Darlin’ Clementine”, with changed lyrics which represented various coins they sang of the monetary value of each coin:

Found a penny, found a penny, found a penny right now.

Right now I found a penny, found a penny right now.

It’s worth one cent, it’s worth one cent, it’s worth one cent right now.

Right now it’s worth one cent, it’s worth one cent right now.

(Repeated with all four coins)

Information regarding the oceans, continents, calendar days/weeks/ months, animals, gardens, insects, spiders was also shared through song. Prior to a presentation on Antarctica provided by a community member the children sang a song about the seven continents as Mrs. Miller pointed to each one. This helped to orient the children to the area of the world map they would soon be discussing. It was noted that after singing that song the children immediately asked for it to be repeated again.

Each day as the children would sing the songs at the beginning of the day through rhyme and repetition they were learning the days of the week and the months of the year.

These songs were referenced during performance assessments at the end of the year and Mrs. Miller allowed the children to “sing” their answers to her questions if they found that beneficial.

Music as an Instructional Tool: Focus on Literacy

Music was used to facilitate literacy instruction and the intent of this study was to explore the ways literacy instruction could be integrated with music. Fieldnotes and videotapes were analyzed to determine how methods, experiences, and techniques were used during the instructional day to provide instruction related to phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. An event was determined as an activity that engaged students in establishing new information *or* allowed them the opportunity to apply information to attain mastery. These events focused on what the students were doing; such as reading from a chart, clapping syllables, reading from a big book, or singing a repetitive song. The analysis focused on what the teacher was doing to facilitate the child’s engagement; such as pointing to a chart during reading, using hand gestures to build understanding, or reading with expression. A clearer understanding of these events is provided through the following descriptions of each component and accompanying examples taken from video transcripts, interview transcripts, and fieldnotes to explore how learning appears in the world of the young child.

Table 8 provides examples of music integration with instructional events that supported instruction in phonemic awareness, phonics, fluency, vocabulary,

comprehension, and concepts about print. A detailed discussion of each of these literacy components follows this initial overview.

Table 8: Sample Events Identified in Coding

| Component/ Description of Elements considered in coding ♪ (Indicates Music was Utilized) | Example of Event Kindergarten Classroom | Example of Event Music Classroom |
|---|---|---|
| Phonemic Awareness: Events included drawing of attention learner to the phoneme level of a word; focus is on the sounds of language without the viewing of letters. Event is aural in nature. | ♪ Children sing “Who Let the Letters Out?” while gesturing the Animated Literacy™ hand motion: repetitively stating the phoneme. | ♪ Children sing <i>Bringing Home a Baby Bumble Bee</i> (use of alliteration) while focusing on /b/ used in phrases. |
| Phonics: Events included making a connection between an identified phoneme and grapheme. Events included onset/rime experiences where phonogram was presented in a visual way. Rules/ generalizations related to spelling were included. | ♪ Children spell C-V-C words by wearing letter cards around their necks, blending the phonemes (PA) and spelling in song the words they have made. The song names the letters used in the word as the children point to the letter cards. | ♪ Children identify that the notes B and F have been removed from the xylophones. They then sing the names of the remaining letters written on a marker board, as they play a short song. |
| Fluency: Events included a focus on increased rate, prosody, and automatic word identification. Events focused on rhythm and flow of reading and oral presentation of language. | ♪ Children sing “Rise and Shine” each day, including a syncopated clapping of rhythm. | ♪ Children chant their names while patting a steady beat on their legs, noting that longer names and shorter names overlap the beat in different ways. |

| | | |
|---|--|--|
| <p>Vocabulary: Events focused on meaning of text at the word level. Events were focused on description of words that enhanced comprehension of written/ oral language.</p> | <p>♪ During a story-song the teacher stopped to clarify and describe words throughout the story she felt might unknown to the children: bland, wail, dull.</p> | <p>♪Teacher asks students to listen to classical music and then tell of words they could use to describe what they heard.</p> |
| <p>Comprehension: Events focused on meaning of written/oral language. Events focused on framing the purpose and deeper understanding of what was being communicated.</p> | <p>♪Teacher stops during a read-aloud story/ song, <i>There Was an Old Lady Who Swallowed a Shell</i>, and asks students to predict what will happen next to the main character.</p> | <p>♪ Teacher asks students to listen to a song, <i>Late Last Night</i>, and dramatize what they hear in the song. Children pretend they are wearing flippers, slippers, etc.</p> |
| <p>Concepts About Print: Events focused on understanding underlying components of how text works, including the fact that pages are read left-right, print is tracked left-right, use of return sweep, 1-1 correspondence, identifying the differences between letters/ words, and use of conventions.</p> | <p>♪Teacher shares Clifford book with children identifying the score of the song in the back and pointing to the words of the song while teaching the children the melody and words.</p> | <p>♪Children take turns using a pointer to point to the rhythm/ notes on a marker board (2 lines of text) while classmates play Orff instruments.</p> |

Phonemic Awareness

Phonemic awareness refers to the ability to focus on and manipulate phonemes in spoken words. This was established through tasks such as phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme segmentation, and phoneme deletion. Phoneme categorization and phoneme deletion were not specifically

sub-coded, due to no incidence occurring during initial coding. Sub-coding in the area of phonemic awareness during this study, therefore, focused on: 1) phoneme isolation; 2) phoneme identity; 3) phoneme blending; and 4) phonemic segmentation.

Phoneme isolation requires a child to recognize the individual sounds in a word. Drawing a child's attention to what sound was heard at the beginning, middle, or end of a word would be demonstration of this type of activity. Mrs. Miller asking what sound a child hears at the end of 'tent' provided an opportunity for a child to demonstrate phoneme isolation. Showing the children a picture and asking what sound they would hear at the beginning of blanket (while pointing to the picture) provides a child with an opportunity to isolate the phoneme /b/ from the rest of the word. Phoneme identity refers to a child's ability to recognize that the same sounds occur in different words. This awareness was often imbedded in alliteration activities. A child asked to identify words that all begin like the word 'family' would require a child to identify and match the phoneme /f/. In Mrs. Miller's class the children used the traditional French tune of "Frère Jacque" and played a singing/ alliteration game which used their individual names:

Are you sleeping, are you sleeping

Sister Jamie, sister Jamie,

Listen to the letter sound, listen to the letter sound,

Jing, jong, jing, jing, jong, jing

Phoneme segmentation requires a child to break apart the phonemes that occur in a word. An example of phoneme segmentation occurred when the children were writing and wanted to write the word 'crab'. Mrs. Miller suggested that they break it apart to listen to each phoneme to determine what they needed to write down. As students

worked to write during independent writing time they often could be heard elongating the word they wanted to write to help in hearing the individual phonemes. Having completed a story by Eric Carle, *The Greedy Python*, several of the children worked to use the word greedy in their individual writing. They elongated the sounds heard - /g//r//e//d//e/ -to hear all five sounds in the word. The spelling of the word, once down on paper, differed depending on the child's understanding of phonics and standardized spelling patterns.

Phoneme blending requires children to take individual phonemes and merge them together to build a word. When Mrs. Miller, after reading Hawkins' *Mig the Pig*, asked the children what word is, /p/ /i/ /g/, and the children answered with the word pig, they demonstrated their ability to blend phonemes. When studying a book of animals during guided reading instruction the children were presented with the word cheetah. Many knew it was not tiger or lion due to the beginning letter. Mrs. Miller asked the children to listen as she provided each phoneme in isolation /ch/ /e/ /t/ /ə / and then asked the children to blend the sounds together to discover the new word.

All four of these types of experiences were noted during the sub-coding of the data. Phoneme isolation appeared twice as often (50%) as phoneme blending (24%). Phoneme segmentation was evident in 15% of the phonemic awareness activities and literacy events focusing on phoneme identity occurred in 11% of the coded events, primarily when the focus of instruction was on alliteration. Instructional events related to phonemic awareness were found to occur daily in both the kindergarten classroom as well as the music education classroom. Table 9 provides information regarding incidences of phonemic awareness events identified through sub-coding during data analysis.

Table 9: Phonemic Awareness Sub-Coding

| Phoneme Isolation | Phoneme Identity | Phoneme Blending | Phoneme Segmentation | Total Occurrences/ Percentages |
|-------------------|------------------|------------------|----------------------|--------------------------------|
| 43 | 9 | 20 | 13 | 85 |
| 50% | 11% | 24% | 15% | 100% |

Phonemic awareness was observed during classroom instruction frequently through the use of song. A cheerful song was used some mornings after children had gathered on the rug. It was called placed to the traditional tune of “She’ll Be Comin’ Round the Mountain”, and was called “If You’re Glad It’s Sunday.” Children would do the actions as the song would direct, but as they sang they heard adjectives (with alliteration) identified with each day of the week.

If you’re glad when it’s Sunday clap your hands (clap, clap)

If you’re glad when it’s Sunday clap your hands (clap, clap)

Let’s say Sunday, super Sunday

If you’re glad when it’s Sunday clap your hands (clap, clap).

This song continued with **marvelous Monday**, **terrific Tuesday**, etc., until the children had sequenced the entire week.

The music educator often asked the children to attend to sounds during her instructional period. She encouraged the children to focus on sounds that were high, low, loud, soft, the same, or different. The children played listening games in which they were asked to identify the source of a sound. For example, Ms. Lyon asked for a child to turn around in order to not see his/her classmates. The child was to cover his/her eyes while Ms. Lyon placed a small stuffed animal in the hand of one of the waiting, seated children.

That child would sing a short refrain from a song they were working on. The child who had turned away was to name the child the voice belonged to. If the child guessed correctly, he/she could choose which child would have the toy next, and the one who had sung would come up to guess the voice of the next child. Many of the songs the children sang during music class incorporated rhyming lyrics and many used alliteration or word play, again an element of phonemic awareness. For example, there was use of alliteration using the /b/ sound in the traditional ‘camp’ tune, “Bringing Home a Baby Bumblebee.”

Animated Literacy™ provided a plan for systematic instruction in phonemic awareness. This instruction was introduced or reinforced daily. During the first semester of the school year, Mrs. Miller spent time each day explicitly teaching the phonemes, gestures, songs, and phrases to introduce the kindergarten children to each phoneme. During the second semester, the children worked to apply what they have learned through their reading and writing and spent time each day engaged in exploring the sounds of their language. Chants, repetitive rhythmic texts, and songs allowed the children to engage in learning about sounds, as they began to recognize the way sounds are put together to form words. The children still referred to the Animated Literacy™ posters and gestures to cue them as they expanded their understanding of phonemes. Mrs. Miller frequently provided them with cues through the Animated Literacy™ gestures when they were struggling with decoding a text. For example, during guided reading instruction Shaun was working to decode the word star, Mrs. Miller began to do the gesture for the /ar/ sound. He worked to decode the initial blend and then while watching her cue provided the final ending sound.

During independent writing time the children would demonstrate application of what they were learning about the sounds. They often used the gestures that represented the sounds they had learned through Animated Literacy™ as they segmented and blended sounds prior to writing words. When the writing of letters became a focus of the instructional event, a phonics code would be given. Writing a page in his farm book, Shawn struggled to write the word ‘chick’. He sat at his seat, pencil poised, for a short period of time sub-vocalizing the word. He then made a ‘chopping’ motion on his other arm (the Animated Literacy™ gesture for /ch/) and then began to write. He chose to begin each sentence with the word ‘chick’ and I could observe him repeating this process to help him make connections between sounds and letters.

Phonics

Events coded as phonics included activities that helped children make connections between identified phoneme and graphemes. These events included: 1) onset/rime activities where the phonograms were presented in a visual way; 2) rules/ generalizations related to spelling that were often explicitly taught and guided students in decoding specific vowel sounds; and 3) letter identification activities that required the children to identify names of letters as they related to sounds. Analysis of data noted that nearly half (46%) of the phonics events were related to onset/rime instruction, a quarter (26%) of the events were related to spelling/ rules instruction, and just over a quarter (28%) of the instructional events were related to letter identification instruction. Table 10 provides information regarding incidences of phonics instructional events identified through sub-coding during data analysis.

Table 10: Phonics Sub-Coding

| Onset/Rime | Invented/Spelling | Letter Identification | Total Occurrences |
|------------|-------------------|-----------------------|-------------------|
| 40 | 23 | 24 | 87 |
| 46% | 26% | 28% | 100% |

Phonics instruction was not provided through the use of a workbook or worksheet, but rather through texts and independent writing of the children. The Animated Literacy™ modeled drawing lessons appeared more closely linked to a worksheet format, but still provided the children with a choice as to what to write. These sheets often included a song to support the learning of a specific blend, digraph, or rime (Appendix B-10). In addition to writing activities, phonics instruction was provided through read-aloud events, shared reading opportunities, and guided reading instruction.

During interactive writing experiences Mrs. Miller and the children worked together to write ideas about a topic. Interactive writing opportunities allowed the children to focus on a rime, while exploring onsets to identify new words. For example, after gathering on the rug the children shared in a read-aloud of a big book entitled, *Mig the Pig*. At the conclusion of the book the children dictated a list of words that shared the /ig/ rime, discussing the letters, digraphs, and blends needed to provide the onset for the words, such as ‘twig’, ‘jig’, ‘fig’, ‘zig’. As Mrs. Miller wrote those words on the chart, she questioned the children regarding beginning, middle, and ending sounds of the words. The children generated the names of the letters as they stretched out and blended the phonemes to write the words. As the words were written, Mrs. Miller would spend a few minutes reviewing the meaning of the words and providing examples of the words used in a sentence. For example, Mrs. Miller explained a jig would be a little dance, and

then modeled a sentence using the word for the children, “the girl danced a jig at the party”. The children then participated in doing the /ig/ Animated Literacy™ gesture as they re-read the words that they had written.

Other times, phonics reviews would occur during guided reading time when students were exploring an instructional level text.

Mrs. Miller: *Frame the word ‘foal’.* (Children frame the word with their fingers.)

What did you notice?

Adam: *It has a long /ō / sound.*

Mrs. Miller: *Look! It has the /ō / sound and it uses our two vowel(oa) rule.*

(Children do Animated Literacy™gesture.) Frame the word calves.

(Children frame it with their fingers) What do you notice about the word calves?

Jamie: *You can’t hear the /l/ sound.*

Mrs. Miller: *Great observation!*

Phonics instruction and review in the music classroom was presented less frequently, yet there were opportunities for the children to review letters and letter sounds in the context of music instruction. Ms. Lyon asked students to look at their Boomwhackers™ to see what letter it represented in the musical alphabet (the letter names are printed on the side). She explained that the green instrument represented the note ‘G’ on the scale, and the yellow instrument represented the note ‘E’ on the musical scale. Ms. Lyon wrote the letter names below the two line musical score. She then talked about the pattern- and the breaking of the pattern- as shown by the letter pattern. She then drew a picture of the metallophone bars that would be used during the playing

of the song, and identified the bars by writing the letter names for the notes. She reminded the students that the larger bar would be the lower note and the smaller bar would be the higher note. The children repeated a chant:

Big is low, small is high that will be true 'til the day I die.

As phonemic awareness and phonics events were coded, it became evident that the more synthetic or isolated the event, the more likely a single code of phonemic awareness or phonics would be given. Authentic writing and reading experiences contained a blend of phonemic awareness and phonics instruction.

Fluency

Events that enhanced fluency included activities focused on increased rate, prosody, and automatic word identification. These events focused on rhythm and flow of reading and primarily the oral presentation of language. In the kindergarten classroom, it was noted that Mrs. Miller at times engaged children in the reading of story/songs. These texts encouraged a combination of choral reading/singing of the text. These types of texts included titles such as *The Wide Mouth Frog*, and *There Was an Old Lady Who Swallowed a Shell*. It was found that when the teacher presented texts of this nature, the children would immediately ask to repeat the story/song again. Fingerplays and familiar chants were also used to build fluency and at times Mrs. Miller would have the children dramatize poems/chants. Having completed a lesson on the sound that /ě/ makes, the children acted out *Five Little Elves Jumping on the Bed*. The experience was repeated until all children had the opportunity to play a character while the children continued to repeat the verse orally, building fluency.

Fluency also was built by Mrs. Miller's frequent re-reading of texts for different purposes. As the children became familiar with a shared text they were able to join in and explore the use of reading with expression as modeled by the teacher. The children's re-readings of Brenda Parkes' *Kakadu Jack* allowed the children to practice new vocabulary, explore the rhythm of the rhymes, and experience the use of alliteration throughout the reading. With each re-reading the children became more expressive and engaged in the reading. The listening center also provided a venue for the children to listen to text read fluently. The children were given high frequency word flash cards that they were encouraged to practice independently at home. Practicing these high frequency words allowed them to become more automatic in their reading, leading to greater fluency. Children also took home their guided reading texts to practice reading at home in order to build reading stamina and fluency.

Repeated rehearsal of songs provided multiple opportunities for the building of fluency during music instruction. Songs were often taught using an echo approach. The teacher would model the phrase in a song and the children would echo it. This would continue for several phrases and then the children would echo a combination of the phrases until children could sing the song independently. The music educator provided multiple experiences to draw the attention of the children to the rhythm of speech, noting that words that were longer in length held more beats (syllables) than shorter words. To enhance the children's understanding of this Ms. Lyon had the children sit in a circle on the floor to play the "name game." The children established a solid beat by patting on their legs, as the teacher used an analogy of their heart beat to help them understand a "steady" beat. The children, taking turns, spoke their own names to the beat. After each

individual child recited his/her name to the steady beat, the other children would echo their name. This activity began with a common chant:

Name game, name game

Say your name and play the name game

The children all participated saying their own names and echoing their friends' names while keeping a steady beat. While saying the names of their friends, they determined that Miranda's name was difficult. Ms. Lyons stopped them and discussed why Miranda's name was difficult- because it was longer and had more syllables; therefore you had to speed up your words to keep the beat. Rhyme, rhythm and repetition appeared to be the theme to building fluency in the setting of the music educator's classroom.

Vocabulary

Vocabulary instruction focused on the meaning of text at the word level. This was critical to enhancing comprehension of written/ oral language. Mrs. Miller modeled an interest in word meaning when reading aloud to the children or when in discussion of various topics. As children engaged in shared book reading experiences she would frequently stop to clarify and expand on vocabulary understanding. It was noted that this attention to vocabulary building was evident when the school counselor, librarian, and substitute teacher shared books as well.

Mrs. Miller attempted to make connections to what was familiar to the children as she provided description of new words. She would first ask the children if they knew the targeted word, and then take ideas from the children. She then would expand and clarify the word meaning, building on what the children provided. She would often provide the children with a synonym that was more familiar to them and then use the new word in a

sentence prior to returning to the text. When coming to the word ‘dull’ in a story, she stopped and asked the children if they knew what ‘dull’ meant in the context of this book. The children did not have a response, so she continued . . . *if something is **dull**, it might be **boring**. You might think it is **dull** to stay in on a rainy day, you might think it was **boring**.*

While reading a book on baby animals the children explored words used to describe the animal babies.

Mrs. Miller: *The first time I read this book, I learned a new word. I went home and my husband didn’t even know that word (fry). Do you know what it is?*

Shawn: *Fishy?* (looking at the picture, and taking a clue from letter **f**)

Mrs. Miller: *A baby fish is called a fry, did you know that?*

(The children laugh and one tells that they only knew about French fries! The next page is an eagle and an eaglet.)

Lindsey: *Is it a chick?*

Mrs. Miller: *It looks like a chick, but use the letters for a clue.*

Lindsey: *Eagle! Oh, our city’s bird!*

Mrs. Meyer: *You’re right Lindsey! It is an eagle and that is our **country’s** bird.*

The Peabody Picture Vocabulary Test is administered to all students in this school each spring. All kindergarten children were assessed prior to coming to kindergarten, at their “Kindergarten Round-up.” In the fall, each kindergarten teacher selected three children from their class. Looking at informal assessment measures, such as district checklists and literacy assessments, such as Marie Clay’s Observation Survey (Clay, 2006), the teachers select one student that is representative of performance that is

considered average, one who exceeded expectations, and one who performed below what was expected. Due to the fact that there are six kindergarten classrooms, the scores for those six children in each of the three categories were averaged to provide an average score for each ability group. At the end of the kindergarten year (May 2007) all children were re-tested using the Peabody Picture Vocabulary Test and the same children's scores were averaged to document an average gain for the year. Measurement was documented as months gained. Children considered to be "high achievers" showed an average gain of 18.67 months. Children identified at the medium level of achievement were reported to have gained 15 months; those children who were identified at the low achievement level were reported to have gained an average of 25.83 months. Vocabulary building is a targeted goal of instruction during kindergarten.

An interest in word meaning was also initiated by the children. As the teacher or music educator talked or read, the children did not hesitate to ask for clarification of word meaning. When Mrs. Miller was sharing a book during a read aloud event, the text stated:

Mrs. Miller: *"swallowing the wave was such as hassle."*

Jennifer: *What does hassle mean?*

Mrs. Miller continued to explain that 'hassle' was something that was difficult and caused some frustration. Child- initiated vocabulary learning was also seen in the context of the music room. As Ms. Lyon was teaching a song about the garden, Gabriella heard her mention 'pansy':

Gabriella: *Are you saying panties?*

Ms. Lyon: *No, the word is pansy.*

Gabriella: *What is a pansy?*

Ms. Lyon: *It is a delicate flower.* (Ms. Lyon shows the children a picture of a pansy on the computer and then explained that pansies were known as delicate plants which is why in the lyrics said, "Precious pansies, beware!")

Lindsey: *What does beware mean?*

The children were taught content vocabulary for music instruction, including words such as 'beat', 'rhythm', 'lullaby', 'rap', and 'march.' The children were also provided with vocabulary instruction about the thematic topics related to the songs they sung. Ms. Lyon wanted the children to understand the vocabulary used in the songs for the kindergarten program. She spent time teaching the meaning of the words in the songs. Many of the words taught for the kindergarten program were related to science content; others were simply high interest. Some of the vocabulary words that were explored while preparing for the program about the garden included: 'ears of corn,' 'bulb,' 'pansy,' 'daffodil,' 'petal,' 'spuds,' 'hoe,' 'rake,' 'do-si-do,' 'curtsy,' 'beware,' 'grace,' and 'clover.'

Children were also given a chance to practice words that they had in their speaking vocabularies. Mrs. Lyon would ask them to listen to instrumental music and then share words they felt described what they heard. They described the way the music made them feel. It was during that time words such as 'loud,' 'soft,' 'quiet,' and other adjectives would be discussed. Ms. Lyon anticipated there would be opportunities for children to sing alone and with partners during the program. The following exchange demonstrates the children's use of analogy to determine the meaning of a new word from a known word.

Ms. Lyon: *Today I am going to have you play in groups of two or three, so it will be a duet ...or...a trio. What do you think we call it when you play or sing by yourself?*

Jamie: *Onelet*

Ms. Lyon: *That is good thinking, but when we play or sing by ourselves, it is called a solo.* (Ms. Lyon continued to use these three terms, solo, duet, and trio often in her discussions with the children.)

Mrs. Miller, Ms. Lyon, as well as support staff in the building allowed time for meaningful exploration of vocabulary and this was often facilitated through literature and song. However, Mrs. Miller also used conversation with the children to expand the children's word knowledge in everyday situations such as in taking attendance. When taking attendance she mentioned that Billy was ill. A child asked what 'ill' meant. She took that opportunity to explain to the class that ill meant sick. Occasionally on days after that, she would ask the children first thing in the morning, if there was anyone absent in the class, who might be ill, reinforcing the new word they had learned. This continual exploration of word meanings was teacher-facilitated as well as child-initiated, and provided for deeper comprehension.

Comprehension

Comprehension events provided opportunities that focused the children's attention on the meaning of written/oral language. These events were directed at framing the purpose and deeper understanding of what was being communicated. Mrs. Miller set clear purposes for reading prior to reading a story. Children were at times asked to identify the problem and solution in the story or make text to self, or text to text

connections with a story. Often they were asked to compare and contrast the characters and plot in the story to another story they had read. Children summarized stories and at times re-told stories in their own words. These attempts to focus children on comprehending the text were often provided through discussion during read-alouds. During guided reading groups the classroom teacher encouraged children to self-monitor their comprehension by asking questions such as, *Does that make sense? Would that make sense, why or why not? How might you have done that differently?*

Mrs. Miller and Ms. Lyon asked children to listen to music and then physically act out what the music asked them to do. At times this was a directed listening comprehension activity, where the words on the CD actually gave the children commands as to what they were to do; for example, ‘gallop,’ skip,’ ‘hop,’ or ‘bounce,’ as on Greg and Steve’s song entitled *Listen and Move*. Many of the songs were sequential in nature, leading the children through a sequence of activities with each verse, or even cumulative in nature such as “Old McDonald Had a Farm.”

Story elements were discussed in both the kindergarten classroom and the music classroom. When learning a song for the Dr. Seuss celebration, the music educator focused on the words in the song that referred to the book characters, such as “Sam I am,” and “Yertle the Turtle.” As the children prepared for their program they discussed the setting of the garden and the characters, such as the weeds, flowers, and the gardener.

When looking at the songs the children were learning, I became aware that at times the chorus or refrain could be identified as the “main idea” of the song, and each verse a new set of supporting details.

Verse #1: Planting seeds, one by one

Hope for rain, hope for sun,

Refrain: *Our work is never done,*

No, our work is never done!

Plant a bulb, soon it will

Be a nice daffodil

Refrain: *Our work is never done,*

No, our work is never done!

Chorus: A garden is a special place, full of life, full of grace

Plant a seed or plant a bulb and they will grow and grow and grow-

They will surely grow.

Verse #2: Digging spuds from the dirt,

Lots of mud on my shirt

Refrain: *Our work is never done,*

No, our work is never done!

Every morn, year by year

Picking corn, ear by ear

Refrain: *Our work is never done,*

No, our work is never done!

Chorus: A garden is a lovely spot, sometimes cold, sometimes hot

All our seeds are in a row and they will grow and grow and grow

They will surely grow!

Another story element connection was observed when Ms. Lyon had the children read the song, "Twinkle, Twinkle, Little Star" with a score of 6 eighth notes and a quarter

note. The children read the song using the Kodály rhythm syllables (ti, ti, ti, ti, ti, ti, ta). They then read it by color coding, the colors representing different notes played when using the Boomwhackers™. She then discussed the color pattern of the song (red, red, green, green, purple, purple, green) and connected this to the concept of high and low pitches. She then summarized with the children that the song got higher, higher, higher, and then lower. Verbally and visually this provided a framework for them to comprehend what they were to be playing and eventually singing. It seemed to be an exploration of the “story line” or “plot” of a song.

Concepts About Print

Children spent time during their instructional day learning various concepts about print. These events focused on understanding the underlying components of how text works: that pages are read left-right, tracking print left-right, return sweep, 1-1 correspondence, identifying the differences between letters and words, and conventions. This was explored during whole group shared/interactive reading opportunities and interactive writing experiences. These concepts were also taught during guided reading lessons and the children were allowed opportunities to apply what they had learned during independent reading and writing opportunities.

Mrs. Miller demonstrated how to track print from left to right and would often encourage children to track print with one to one correspondence by giving them verbal cues such as, *push the buttons under each word*. During class discussions as well as during daily independent writing she would explain concepts about letters, words, the use of capital/lowercase letters, and conventions. Spacing between words was modeled and the children were provided with a “space man” tool to use as a spacing guide when

writing independently. This tool was a ½” wide astronaut-looking toy that provided a guide for space to be left between words as the children wrote. Children were never required to use this tool, but it was available if they chose to use it.

Instruction was rarely provided explicitly without the use of authentic reading or writing. Mrs. Miller used standardized vocabulary for terms such as question marks, exclamation marks, and quotation marks; but sometimes used terms that were more meaningful for the kindergarten children. For example, quotation marks were often referred to as *talking marks*. She most often described the function as she used the term. For example, she would tell the children that *there is the exclamation mark, so we will read that with excitement!*

Center time was an opportunity for children to practice concepts of print in meaningful ways, allowing for differentiation due to various ability levels. Children would visit the writing center where they could copy text, label their drawings, or write their own stories. During a shared writing experience Mrs. Miller modeled how she might begin her story about Clifford. During this whole group activity she engaged the children in a discussion about several concepts about print. She began with the reading of a Clifford book and then proceeded to draft a story:

Mrs. Miller: *We are going to write a story today about Clifford. When I begin to write a story, I first start thinking about the main idea- what my story is going to be about. And, it has to go with the picture, doesn't it?*

(She then allowed the children to brainstorm ideas that they might want to write about as she begins to model the writing.)

I'm going to begin with I, and we always need that to be a capital letter. I love...and I'm going to write Clifford....what do we need at the beginning of Clifford?

Child: *A capital letter*

Mrs. Miller: *Why?*

Child: *Because it is a name and names need to start with a capital letter.*

Mrs. Miller: *What will I need at the end of this sentence?*

Child: *A dot. (period)*

(Mrs. Miller continued to discuss the need for space between words to allow for those who want to read the story to do so with ease.)

Mrs. Miller used large pointers to model for children how to track print from left to right and she modeled return sweep while reading big books. She encouraged the children to practice and apply this by providing the listening center with large pointers for the children to use as well. Ms. Lyons also modeled and asked children to track print accurately during music instruction. She modeled left-right/ return sweep using the overhead as she taught the children new songs. She asked the children to demonstrate their understanding of this during lessons that required them to play the Orff instruments. While children would sit in pairs to share in the playing of the instruments, she would call one child up to use a large, colorful pointer to track the notes and/or rhythmic syllables on the marker board. A child would track the print and demonstrate return sweep of notes while the other children would be seated at the instruments. The partner not playing the instrument would participate by singing the rhythmic syllables or lyrics while attending to the marker board.

Balanced Instruction through Integration of Resources

Resources available to provide learning opportunities for children must be utilized to provide the optimal learning experience for young literacy learners. The experienced kindergarten teacher provided a strong instructional program for children through the integration of six components of literacy instruction: phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. The music educator provided a creative approach to the teaching of the same components using opportunities unique to the music classroom.

Data from observational fieldnotes, video transcripts, and interview transcripts were coded (Appendix B-2) and the analysis of data of these separate and combined efforts will be examined in the following section. A total of 437 incidences of literacy learning were examined in the context of both the kindergarten classroom and the music education classroom. These incidences were then more closely examined to identify the instructional objectives and specifically what the teacher was providing in the way of instruction as well as what the children were doing to facilitate their learning. The analysis of this data provided information regarding the focus of instructional events related to the individual components of literacy instruction. These incidences were established over a period of nine weeks. Observations occurred on 17 separate visits, 14 of those days observation also occurred in the music educator's classroom. A total of 2,255 minutes of observation occurred in the context of the kindergarten classroom in addition to 290 minutes of observation that occurred exclusively in the music education classroom. Table 11 delineates the analysis that will be discussed in the following section.

Table 11: Incidences of Literacy Components

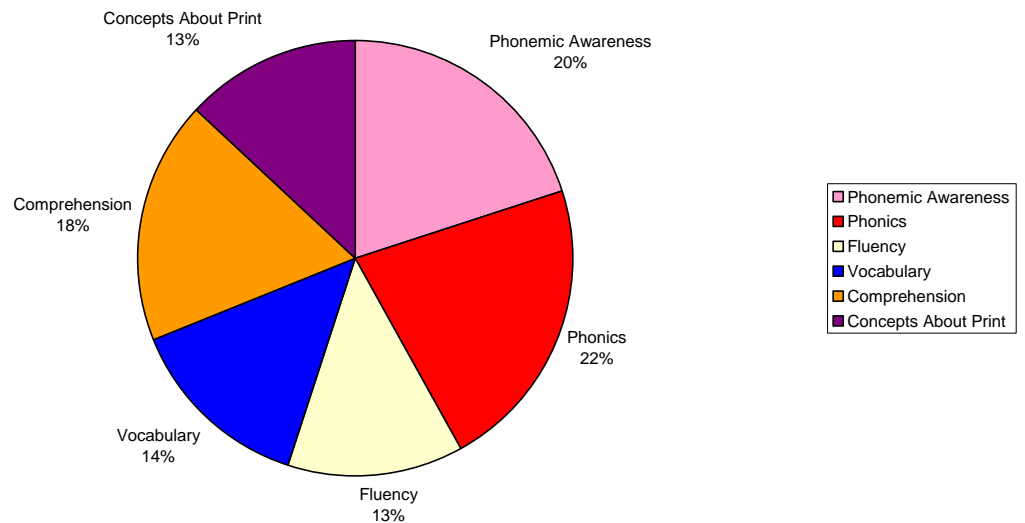
| Component | Classroom Teacher | | Music Educator | | Total | |
|-----------------------------|--------------------------|----------|-----------------------|----------|--------------|------------|
| | Count | % | Count | % | Count | % |
| Phonemic Awareness | 77 | 20% | 8 | 14% | 85 | 19% |
| Phonics | 83 | 22% | 4 | 6% | 87 | 20% |
| Fluency | 48 | 13% | 17 | 29% | 65 | 15% |
| Vocabulary | 52 | 14% | 14 | 23% | 66 | 15% |
| Comprehension | 70 | 18% | 8 | 14% | 78 | 18% |
| Concepts About Print | 48 | 13% | 8 | 14% | 56 | 13% |
| Total | 378 | | 59 | | 437 | 100 |

Kindergarten Teacher

The kindergarten teacher provided instruction to support all six components of literacy instruction that were identified in the study. After the various events were identified and recorded they were coded. A total of 437 recorded incidences of instruction were identified during the observational period of this study. Of the 437 recorded incidences, 378 of those were observed in the kindergarten classroom, under the direction of Mrs. Miller. Although Mrs. Miller provided instruction to support all six components, slightly prominent categories emerged, those being phonemic awareness

(20%), phonics (22%), and comprehension (18%). Figure 2 presents a graphic representation of the classroom teacher's incidences of literacy events when analyzed by component.

Figure 2: Classroom Teacher/ Components of Literacy Instruction

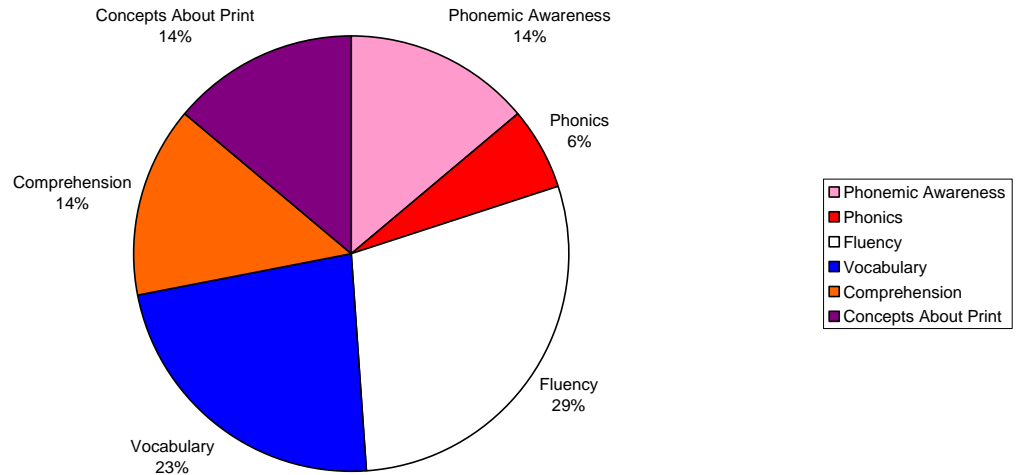


The Music Educator

The music educator also provided instruction to support all six components of literacy instruction identified during the study. Of the 437 recorded incidences of instruction, 59 of those occurred under the direction of Ms. Lyon, the music educator. The prominent categories that emerged when analyzing these incidences were fluency (29%) and vocabulary (23%). Comprehension, concepts about print, and phonemic awareness each provided 14% of the incidences of instruction while phonics instruction was identified in only 6% of the events. Figure 3 presents a graphic representation of the

incidence of components of literacy instruction utilized by the music educator as identified through data analysis.

Figure 3: Music Educator/ Components of Literacy Instruction

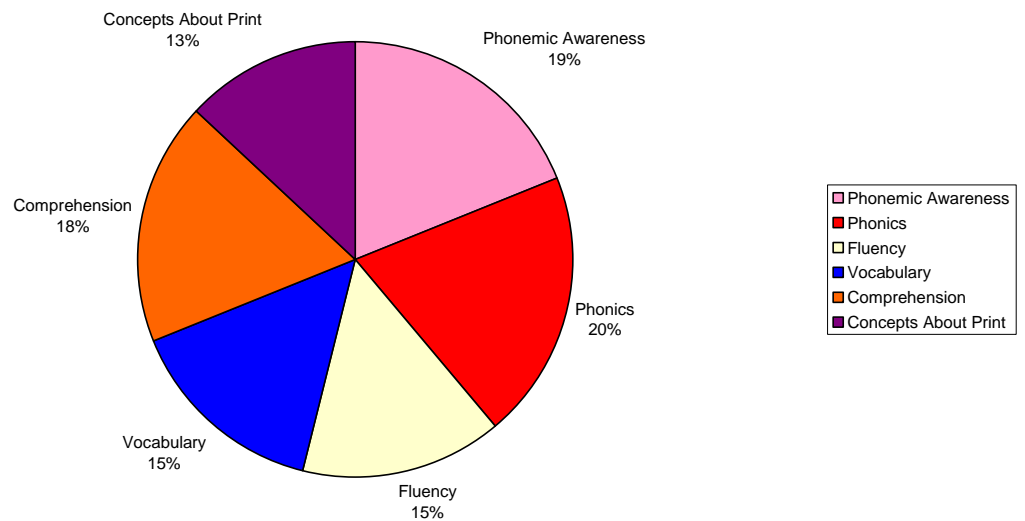


The Balance of Instructional Events

Analysis of the variety of events that occurred during combined instructional time presented a view of the focus of instruction during the instructional day. Both educators worked in tandem in order to increase the children’s understanding of literacy. Review of data presented an opportunity to analyze the *combined* incidences of literacy instruction provided by the classroom teacher and the music educator. Analyzing the 437 literacy learning events 85, or 19% of the events were determined to be linked to instruction in phonemic awareness. Phonics instruction was identified in 87 or 20% of the events. Fluency was identified in 65 (15%) of the events, vocabulary in 66 (15%) of

the events, comprehension in 78 (18%) of the events, and concepts about print in 56 (13%) of the incidences. Figure 4 provides a graphic representation of the combination of instructional incidences. Figure 4 illustrates the balance that was achieved through the combined instruction of the classroom teacher and music educator related to the six examined components of literacy instruction.

Figure 4: Combined Literacy Events



The classroom teacher and music educator, when working as an instructional team, provided a balance of instructional incidences for all components of literacy instruction including phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. While each educator alone addressed all literacy components, together they provided increasingly balanced instruction that worked to generate experiences which promoted quality literacy instruction.

Children's Perceptions of the Role of Music

Guided conversations were held to determine the understanding children have regarding the role of music during their instructional day. They were divided into 6 groups (two to four children in each group) by the classroom teacher. The interviews were held at the back of the room, a quiet space that was removed from the work center area. The children sat around a small table with child-sized chairs. The small groups allowed for children to be able to closely view a few minutes of videotape prior to questions being asked. Several ideas emerged through analysis of the transcriptions regarding the children's perceptions regarding music. During the interviews:

- Children recognized the purpose for repeated singing/ reading during the instructional day
- Children linked music with movement
- Children could articulate their opinions regarding preferences for types of music and instruments
- Children could identify ways in which they engaged in music outside the school day
- Children could provide information regarding a wide of variety of instruments and various styles of music.

Children appeared to understand the purpose for singing songs as a part of the routine of the day and recognized that there was a purpose for singing songs and reading stories repeatedly. When asked about singing the same songs as part of the morning routine, or during music class, they shared these responses:

Bobby: *Practicing helps you learn to not mess up...when you keep practicing.*

Miranda: *(we do it) So we can remember 'em.*

Amanda: *So we know the days of the week and we learn the songs that are going to be in our play.*

Nathan: *That way we won't get shy. Because you want to learn.*

The children associated practice with improved performance. The last comment was related to the repeated singing of songs for the kindergarten program. This comment came from Nathan, a very bright, shy boy who appeared nervous at times when asked to present information in front of others. He shared that he had heard that some of the first graders “got a little shy” during their program earlier in the year. He articulated his understanding of repeated practice as a way to prevent his “stage fright” through being prepared for the kindergarten program. The children also appeared to make this connection with reading text. Makayla provided this insight:

Researcher: *What do you like about reading?*

Makayla: *You can get better at it, like when you want to read something you can get better at it and then you can keep doing it over and over it again so the next time you read it, you'll know how to do it.*

The children recognized that learning occurred through music. In conversation about music that might be heard at home, Nathan and Kyle shared their ideas with me:

Researcher: *Do you hear music when you are at your house?*

Nathan: *Yeah, my mom does day care at my house. Every time I get home my mom always has music playing.*

Researcher: *What kind of music does she play?*

Nathan: *She sometimes plays kind of like animal songs...and like ABC songs.*

Researcher: *Why do you think she does that?*

Nathan: *I know why, because she wants the daycare to learn.*

Researcher: *So she thinks they are going to learn from the music?*

Nathan: *Yeah, because they learn all about that stuff...and there's a few songs that do that.*

Researcher: *Kyle, what is your favorite song?*

Kyle: *"Who Let the Letters Out?"*

Researcher: *Why do you like that one?*

Kyle: *Because you learn a,b,c,d,e,f,g...*

Children shared that they associated music with movement and reacted positively to the idea that it allowed them to get up and move. Some referred to this as dancing, but most just called it moving.

Researcher: *Why do you like the song "Freeze"?*

Gabriella: *Because you get to dance! You sing too and dance. It's fun!*

Jamie: *Dancing is fun!*

Gabriella: *I like "Listen and Learn." It helps you learn to listen to the music. You get in a circle and you...well you hop when it says hop, and you skate when it says skate.*

Jamie: *I learned that dancing is fun. I have a jazz class*

The one child who appeared not to enjoy the movement aspect of music was Brandon. Although Brandon did not verbally express this opinion to me, Mrs. Grant, his para-professional, shared with me that when movement is involved, he often becomes more agitated and asks for it to stop. I did observe this several times during the study. He did not attend gym with the children due to his dislike of lots of movement and was

just beginning to attend recess with large groups of children on certain days. Mrs. Grant stated that when the children participated in a song called “Freeze”, where they dance as fast as they want to and then freeze when the music asks them to; Brandon at times has become upset and asked to leave the room due to the high activity level. Other times, he appears to enjoy music and while he does not participate in the actions, he does sing the songs during music instruction with the support of his para-professional.

Children could clearly explain their preferences in experiences that involved music. Many preferred songs that allowed them to move and had a strong beat or interesting rhythm, such as “The Weed Rap” they were learning for their program. They could explain what they were singing about demonstrating that they comprehended the message conveyed by the lyrics.

Researcher: (In response to this child saying he liked “The Weed Rap” best) *A weed, what is a weed?*

Makayla: *Something that is in your garden that grows really fast all over your garden and they kill flowers. I just throw them in the woods.*

Children focused on the words of songs and during conversations they could repeat the words of songs that they had learned in their kindergarten classroom as well as the music room. They also focused on lyrics that they had heard outside the school setting. Lindsey liked a country western song, but she told me she shouldn’t sing it, as it had a “bad” word in it. She chose to sing it anyway, omitting the “bad” word. She shared with me, *If you’re going through ***** keep on going, don’t look back, just keep moving...* Miranda sang an entire verse and chorus from Tim McGraw’s “Fly Away” and then commented, *I listen to a lot of country music...I live in the country.*

The children shared that they listened to music outside of the classroom in various contexts: TV, radio, computer games, movies, and on their CD players. Shawn shared that his radio only played words and talk. He encountered music with his 'turtle movies' but did not appear to be able to connect it to other everyday experiences. He often sat at the table with arms crossed during the opening music that was done each day. Upon viewing the videotape and not being able to see himself on the screen (as he was sitting), he started participating each day. He seemed to engage to a greater extent as the semester continued and fully participated in the kindergarten program the last week of school. Others shared their experiences with their encounters with music beyond the school day.

Christopher: *I listen to it on my computer. I listen to it on my hunting game.*

Jamie: *I listen to music on my radio, like Shakira.*

One pair of boys informed me that their favorite music was from the Naked Brothers Band. They explained that Alex was their favorite musician on this Nickelodeon™ television show and told me that he plays the drums. Other children voiced their delight in listening to music outside of the classroom and one informed me about the music in her car.

Gabriella: *In my car...it sings jazz!*

Researcher: *Oh, jazz? What does that mean?*

Gabriella: *Well, it's like rock music, but it's not.*

Researcher: *How is it different? Do you know?*

Gabriella: *Well it's kind of different, it almost rocks- but it doesn't rock. Yeah, like the instrument- that thing that goes whhooop (she moves her hand down and up).*

Researcher: *Do you mean a trombone?*

Gabriella: *No, It's a thing that goes down and up (the pitch of her voice goes down and up) and it makes pretty noises. It goes like...the mouth thing is right here (gestures to under her chin) and it goes down and around.*

Researcher: *A saxophone?*

Gabriella: *YES!*

Carl: *My car only has rock music, kind of, not always, but rock music. It has a guitar and I like that.*

Other children shared experiences that they had with instruments and spoke of playing instruments at home with siblings, parents, and grandparents. They spoke of engaging with music in the car, at concerts, at home, and in church. Many had experiences with musical instruments and Nathan spoke of playing the piano by reading the notes from books. Several could discuss different types of music, saying that they liked lullabies, raps, or nursery rhyme songs. Miranda, who lives in the country, considers the birds' singing to be music and many others could discuss various instruments that they were acquainted with, such as guitar, piano, harp, saxophone, harmonica, triangle, bass violin, drums, trombone, and even their own lunch box, as Kyle stated that he *can play it like the drums*.

The children shared that they recognized that the use of music was purposeful. They could articulate their opinion that learning occurred through music and the majority of children equated music with movement and expressed that was a positive attribute of music. The children could also share their definite preferences for music styles, instruments, and contexts for listening. Children demonstrated that they attended to the

lyrics they heard and identified music as both an expressive and receptive form of expression. They often referred to it in a social context and could explain how music was a part of their lives within the classroom and beyond. For example, Kaily explained that:

When my mom has to go to a meeting or something, we go to our grandmas and grandpas and we have a very, very, old guitar. My grandpa is really good at playing it!

In another group conversation the children discussed different places where they encounter music beyond the school day:

Billy: Well, my dad plays some music on his computer and it kind of does a little thing.

Amanda: I have a book that has a little CD player and it is kind of like about princesses and I can pick which tape I want and put it in it and listen.

Miranda: Everytime that I go in the car and I hear 1,2,3 I think that is my favoritest, favoritest, favoritest, favoritest song!

Summary

A qualitative case study was conducted to explore how those who educate kindergarten children might use music to support early literacy learning. Data were collected regarding the literacy environment which identified five characteristics of instructional practice that emerged within the setting of this case study. These components included phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. The environment was one of caring individuals that engaged children in conversations. Educators continued to seek to help children make connections from previous knowledge to new learning. Collaboration was evident which led to a consistency in practice.

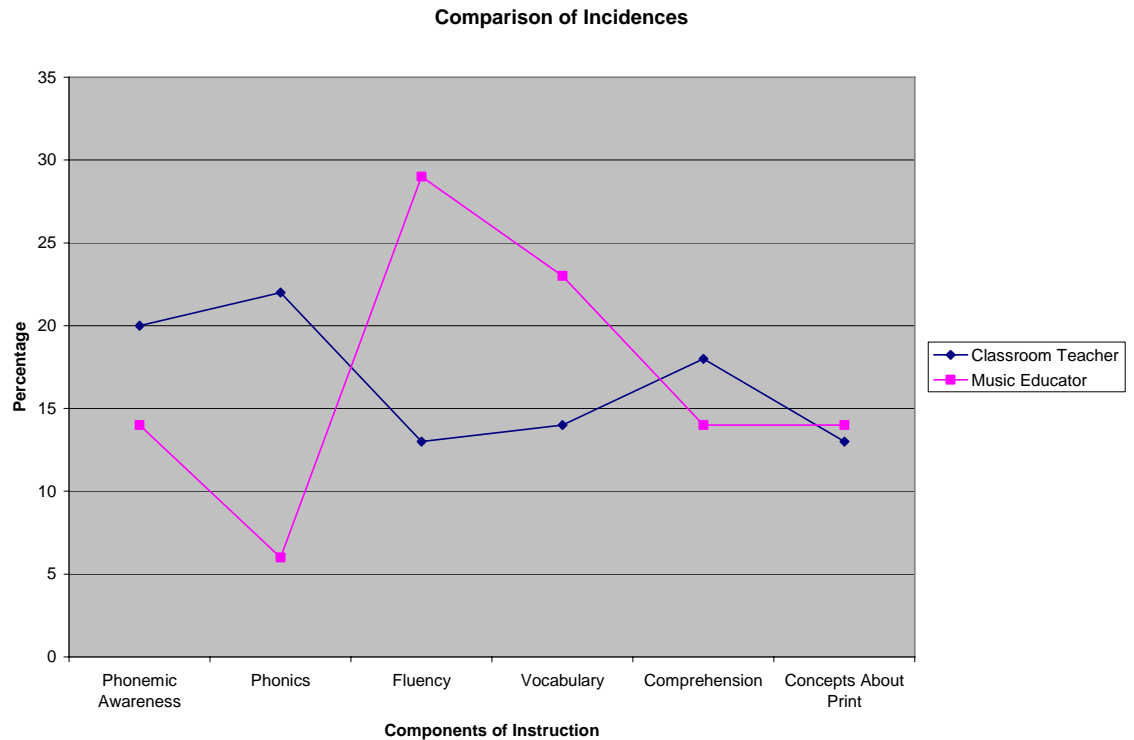
The classroom teacher and music educator shared several common principles of instruction which included:

- Gradual release of responsibility
- Use of metacognition
- Frequent use of children’s literature and instructional texts
- Support of oral language development to foster vocabulary development
- Active engagement of the learner to include frequent gesturing

The classroom teacher and music educator also utilized many of the same materials and both educators demonstrated instruction that supported learning in the areas of phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. These instructional events occurred in a variety of settings and occurred both with and without the use of music.

Analysis of the data provided an opportunity to view methods, experiences, and techniques that each teacher used to meet the needs of the children. It was discovered that although Mrs. Miller structured instruction to address all six components of reading instruction-phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print, she provided more incidences of instruction in the areas of phonemic awareness, phonics, and comprehension. This was balanced by Ms. Lyon’s instruction which focused more heavily on the components of fluency and vocabulary. Figure 5 provides a graphic representation to examine how instructional experiences of one educator seemed to complement and supplement those of the other educator.

Figure 5: Comparison of Classroom Teacher/Music Educator Incidences



Balanced instruction provided opportunities for children to engage in music during their school day. During guided conversations children shared that they perceived music as a purposeful activity that could enhance learning. They conversed about their preferences regarding music and articulated opportunities they had to engage in music both inside and outside the school day.

In the following chapter I will discuss the results reported in this chapter by examining their connection to the theoretical framework and research base presented in Chapter 2. The intersection between music and literacy will be framed through the research questions that guided this study and implications for classroom practice and administrative decisions will be addressed as they relate to the use of music to support the literacy learning of young children. Suggestions for future research to explore the use of music as an avenue for learning and implications for classroom practice will be provided.

CHAPTER 5 - Discussion

The purpose of this chapter is to provide a discussion of the findings related to how music is used in a kindergarten classroom to support the literacy learning of young children. Discussion of the findings which emerged through analysis of observational field notes, interview/ video transcripts, and additional documents and artifacts identifies: the characteristics of an effective literacy environment for young children; the pedagogical practices common between a kindergarten teacher and music educator; the intersection between literacy and music in the areas of phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print; and the perceptions children have regarding music in their academic and non-academic lives. Practical implications for pedagogical decisions and implications for future research will be examined.

Summary of the Study

Teachers continue to seek ways to meet the needs of children in the climate of No Child Left Behind (2001). It is critical that educators recognize and utilize effective instructional opportunities to engage young learners and motivate them toward a mastery of literacy skills. Fine arts instruction in schools is increasingly being limited to allow for more time in the school day dedicated to instruction of reading and writing. It must be examined how to best meet the needs of children, while providing them with creative, rich experiences that will continue to motivate them for future learning. This study explored how a kindergarten teacher and a music educator provided support for literacy instruction through the use of music. Daily music instruction and purposeful integration

of music in the kindergarten classroom provided an opportunity for children to benefit from instruction focused upon components of effective reading instruction as identified by the National Reading Panel Report (2000).

This qualitative case study was conducted in a small midwestern town in a school that served as the community's only kindergarten through second grade attendance center. The study was conducted between February 15 and April 23, 2007. One class of kindergarten students was followed throughout their daily literacy instructional periods and observed in the setting of both the kindergarten classroom and the music education classroom. Music instruction was provided daily for a 20 minute period and literacy instruction occurred in the kindergarten classroom, both in the morning and in the afternoon. Observational fieldnotes were kept and audiotaped interviews and videotapes were transcribed for data analysis. The classroom teacher provided additional artifacts for analysis and informal conversations held with educators continued to deepen the understanding of the intersection between music and literacy.

The data were analyzed to reveal that the school provided a supportive, high quality literacy learning environment and both teachers supported early literacy instruction in the areas of phonemic awareness, phonics, fluency, vocabulary, comprehension, and concepts about print. This is consistent with the definition of high quality literacy instruction as developed by the Center for the Improvement of Early Reading Achievement (CIERA) (Armbruster, Lehr, & Osborn, 2001). Commonalities in practice and materials were explored and unique characteristics and experiences were noted based on each of the classroom settings.

Findings

The focus of this study was to discover and describe the way music is being used in a kindergarten classroom to encourage and support early literacy learning. Five characteristics of the learning environment emerged from analysis of observational fieldnotes, interview transcripts, and examination of additional documents and artifacts. The data analyzed revealed characteristics of the learning environment that were present in the kindergarten classroom, the music education classroom, and the school in general. These characteristics produced a climate conducive to learning. These findings included: 1) establishment of a caring environment; 2) rich conversations which included children and adults; 3) instructional connections made to prior knowledge and experiences; 4) instruction guided by collaboration of teachers, parents, and community members; and 5) consistency of instructional practice.

The data also revealed that there were five commonalities identified occurring throughout instructional events in the context of music and literacy instruction. These pedagogical practices were observed in both the kindergarten classroom and the music education classroom. These included: 1) a gradual release of responsibility; 2) metacognition; 3) use of quality children's literature; 4) development of oral and written language; and 5) active engagement of the learner.

Through the careful analysis of fieldnotes, videotapes, audiotapes, and additional artifacts the following responses are provided to address the four research questions that framed this study. Each question includes findings from the study and relates them to both theoretical foundations and research studies which served as a background for this study.

1. What types of instructional methods, experiences, and techniques occur in a kindergarten classroom to engage students in literacy learning?

The socio-cultural theoretical framework of Vygotsky (1978) appeared to guide the instructional methods, experiences, and techniques that were observed in the context of both classrooms. The music and literacy experiences that were most often observed occurred in the context of social interaction, where children engaged in conversation and discourse to increase their own understanding.

The teaching practices observed in this study supported the research reported by Strickland and Riley-Ayers (2006), which identified components that should be present in a quality early literacy curriculum. Those are: 1) oral language development which includes vocabulary and listening; 2) an understanding of the alphabetic code, that includes phonological/phonemic awareness and knowledge of the alphabet; and 3) knowledge and understanding about print and its use. The classroom teacher and music educator consistently included these components in their planning and implementation of instruction.

The method used for literacy instruction was a multifaceted balanced literacy approach. Framed within a methodology of guided reading, literacy instruction occurred throughout the day. This time was scheduled to coincide with the provision of a certified teacher who was hired as a reading assistant to facilitate guided reading groups. Additional literacy centers were also scheduled during the afternoon. However, it was clearly evident the first week of the study that literacy instruction occurred *all day*, integrated into each subject area. Throughout the day children were engaged in meaningful experiences with text. There was a balanced method of delivery founded

upon daily sharing of a wide variety of quality literature. There was also time allotted daily for interactive and independent writing, listening, and speaking. The children had daily, rich opportunities to savor illustrations and photographs related to text. Many of the opportunities for drawing were completed in the context of a directed lesson, rather than creative free expression, yet the children appeared to enjoy these directed ‘drawing lessons’. All aspects of a comprehensive literacy program were present and this multifaceted method for instruction provided an optimal learning opportunity for the children.

The experiences and activities that supported literacy learning in the kindergarten classroom were grounded in the theoretical framework of constructivism (Piaget, 1977). Piaget’s belief that play was an avenue for learning was evident in the learning experiences. Mrs. Miller frequently referred to instructional literacy activities as ‘learning games’ and the children also appeared to take that view as well, appearing eager to participate, cheering upon completion of the activity, and celebrating the success of their peers. These experiences encouraged the children to act on their environment and manipulate objects and items to build their own understanding. They used puppets, letter/word cards, puzzle pieces, and pictures to build their understanding of text. Providing children with an area for dramatic play during center time supported the belief that Mrs. Miller saw play as the work of children. Although the partnering of children and the sequence of centers children attended were planned by Mrs. Miller, the children were provided with opportunities for choice during much of center time. This allowed them to be guided by their own interests and abilities. Mrs. Miller commented to me several times that she was exploring ways to improve the accountability of the children at

centers. She was seeking ways to provide documentation, or evidence, of learning accomplished during this period of self-directed learning.

Phonemic awareness and phonics appeared to be building blocks upon which other instructional tasks were built. The Animated Literacy™ component of instruction provided a structured way for Mrs. Miller to provide systematic and explicit instruction linking phonemic awareness to phonics application. Skill and strategy instruction was provided within the context of reading and writing experiences, with the exception of the Animated Literacy™ reviews which were conducted in isolation. Mrs. Miller explained, however, that these were initially taught, in the fall, through literature and connected texts. An interesting observation was the varying degree to which certain children self-initiated the Animated Literacy™ gestures. Although all children knew and could use the gestures taught in this program, these gestures appeared to be extremely helpful to Shawn, a child repeating kindergarten. Mrs. Miller used them often to support him during guided reading and he often self-initiated their use during independent writing experiences. I am unsure if this was due to the fact this was his second year of exposure to the program, or if he had self-determined that the gestures helped him be successful.

Research conducted by Lundberg, Frost, and Peterson (1998) addressed the positive impact a structured phonemic awareness program can have on the learning of young readers and this was demonstrated during my observations. In this cited study, phoneme manipulation instruction was shown to be effective and its use continued to support future spelling instruction- an essential consideration as these children continue into first grade. Ehri and Nunes (2002) identified in their research that phonemic awareness instruction was especially effective in small group settings, but also effective

in whole group and individual settings as well. Mrs. Miller provided phonemic awareness instruction most often in the small group setting, but also included opportunities for whole group review and differentiation of instruction through individual instruction. The Animated Literacy™ program was a part of each day's whole group literacy review and also provided support for the students during whole group learning, guided reading instruction, and independent writing time. I rarely saw the children self-initiate the gestures when they were independently reading, but they did self-initiate them during independent writing.

Teaching of phonemic awareness and phonics was implemented explicitly and implicitly through direct instruction as well as immersing the children in exploration of self-selected literature and purposefully chosen read-alouds. Instruction that included the naming of letters was studied during data analysis and was found to support the findings of Ball and Blachman (1991) that concluded that students being taught phonemic awareness in conjunction with letter names may have that ability extended through effective instruction that uses pictures and text. Fluency was addressed through the use of predictable and repetitive texts, chants, and songs. It was noted that while this was a component of instruction in the kindergarten classroom, it was an even stronger focus of practice in the music education room. Vocabulary and comprehension was also taught through literacy events in the kindergarten classroom, but strongly supported by instructional events in the music classroom.

In research conducted by Nichols et al. (2004), it was noted that when concepts about print instruction was added to phonemic awareness experiences the result was an optimal learning environment. It was evident that in this kindergarten classroom,

children were taught concepts about print in daily reading and writing experiences, often in conjunction with phonemic awareness and phonics instruction. Mrs. Miller provided this instruction as she engaged the children in shared reading and writing opportunities and then provided daily opportunities to practice this understanding as they constructed their own narrative texts. While doing so, she reminded them of the purpose of conventional concepts about print to allow them to communicate with an audience, reinforcing the social benefit of being a capable reader and writer. However, it must be stated that she did not stress this to the point of discouraging the children's willingness to write. I found it most interesting that during writing time the children never asked if they could quit writing, and I did not hear them ask if they had written 'enough'. At times they stopped writing, re-read what they had written, shared their writing with those around them or the teacher, or worked on an illustration. However, they didn't state they were done, but continued to write until Mrs. Miller let them know it was time to transition to another event.

The literacy learning opportunities that the children participated in were both expressive and receptive. They were read to and they wrote; they listened and they sang. They became more engaged with the use of props, manipulatives, dancing, or playing an instrument. They actively participated in the sharing of books and found pleasure in the tasks of learning. The techniques that Mrs. Miller used to engage her young learners were grounded in her philosophy that all children are readers. She praised their efforts and encouraged them, celebrating the progress they made. She often used observational comments to reinforce what they were doing to help themselves succeed. "That's great! You're doing what a good reader does...good readers get their mouths ready to

read...good readers ask ‘does this make sense?’...they look at the pictures...” During the period of my observations, no child stated that he/she couldn’t do something or that it was too hard. The children appeared to have strong self-efficacy.

Vygotsky (1978) believed that learning occurs along a continuum as children work to solve a problem. Children progress toward mastery by being assisted by more capable adults and peers. The children in Mrs. Miller’s classroom were recipients of purposeful modeling. Through careful modeling and demonstration and then the opportunity to practice with her supportive assistance, the children could take over more of the responsibility for their learning, becoming more independent in their tasks. As they grew in confidence they offered help to their peers and worked as a community of learners when approaching a problem or writing task. Strategy instruction to facilitate decoding and comprehension, and opportunities to build reading stamina through practicing of reading text at an independent/ instructional level were evident.

The texts the children were exposed to were exciting and engaging for the young learners in the class. Children were introduced to books with unique features and the teacher’s love of stories and illustrations was evident. Her modeling of fluent, expressive reading kept the children’s attention and most often caused them to request a second reading. This gift of sharing a book with excitement and expression appeared to be a product of years of experience and a true love of literature. Books read by a less experienced high school aide, although attended to, did not elicit the strength of response as book read aloud by Mrs. Miller. Children were invited to investigate all books on their own after a read-aloud event. Texts, including the big books, were placed in several areas of the room for children to explore on their own during center opportunities or

during rest/ independent reading time. Several activities such as specific songs, chants, description of patterning, high frequency word identification, and games were engaged in routinely. The use of routine and repetitive activities is supported by Smith (2005) who stated in his research that the brain receives stimulation through repeated experiences, as more neural connections are recruited through repetition, making the synapses more efficient and stronger.

Mrs. Miller's and Ms. Lyon's use of repetitive songs and chants is also supported by research conducted by Papanicolaou et al. (2004). That research reported that repeated exposure to a word (verbal or written) allows learners to more easily store that information as a single unit in the occipito-temporal (word form) area of the brain. This is connected with the child's increased ability to re-call the word when seeing it in the future, leading them towards automaticity in early reading behaviors.

The literacy learning activities in which the children engaged often allowed them to acquire information and demonstrate mastery of concepts in multiple ways. Gardner's (1983,2004) Theory of Multiple Intelligence proposes that it is more accurate to identify the cognitive ability of an individual as a collection of different, but integrated, cognitive aptitudes. When analyzing the activities and experiences in which kindergarten children engaged, it was evident that multiple forms of intelligence were represented by the actions and responses of the children.

It was determined the types of instructional methods, experiences, and techniques that occurred in this kindergarten classroom to engage the young children in literacy learning were varied and purposefully chosen. The children were exposed to experiences which actively engaged them in the learning process to allow them to

construct their understanding about written and oral communication. Children were allowed to make choices based on their interests and abilities as they engaged in literacy learning which occurred throughout the entire day. These activities and experiences were often accompanied with the use of music leading to a discussion of the second question which guided this study.

2. How was music integrated within the context of literacy instruction in the kindergarten classroom?

Music was used purposefully to meet the needs of all learners in the kindergarten classroom. This was complemented and extended by the instruction that occurred daily in the music education classroom. Wolfe and Nevills (2004) reported in their research that the critical years for literacy learning are from birth to age eight. They stated that in the area of cognition, young children are very responsive to instruction, more than at any other time during their formal education. The brain responds to the experiences it has, in solidifying neurological connections, or pruning synaptic connections that are not used, to increase efficiency. Children in this study, five and six year olds, were at a prime age for engaging in these learning opportunities. These children eagerly tried new activities and enjoyed the repeated songs and chants that were incorporated throughout their day. These experiences were met with smiles, participation, and often a request to continue or repeat the activity. Music was used in the kindergarten classroom to deliver content, to explore rhythm and rhyme of language, to provide opportunities for listening comprehension, and to allow children to respond aesthetically through movement.

Literacy learning was framed by Gardner's (1983, 2004) Theory of Multiple Intelligences and each type of intelligence was demonstrated- linguistic, musical, logical-

mathematical, spatial, bodily-kinesthetic, naturalistic, interpersonal, and intrapersonal. All children were provided with opportunities to explore and attend to building their strengths in each type of intelligence, while specific children appeared to demonstrate a propensity for a certain intelligence. The classroom teacher and the music educator provided multiple methods of presentation and learning was demonstrated in a variety of ways. To demonstrate linguistic intelligence, children used music to expand vocabulary and explore words related to conceptual and linguistic knowledge. The words and phrases placed to a tune were repeated, or rehearsed, to build fluency. Children explored all venues of written and oral communication to construct meaning from their experiences. Specific children demonstrated a strong desire to learn about words by initiating questions regarding words they found interesting or unfamiliar. This provided opportunities for all children to learn from the questions of others. The children were encouraged to participate in daily conversations with one another and with the teacher.

Children demonstrated strength of musical intelligence when they could identify and repeat rhythm, pitch, and accurately repeat a melody with or without lyrics. Certain children more easily identified a steady beat and rhythms evident during clapping activities. Some of the children tended to sway to the music during independent reading time, leading me to assume they were attending to the music at some level of cognitive awareness. At times children would request that songs be repeated and could be heard singing on their own during center time.

Logical-mathematical intelligence was demonstrated through the use of numerical symbols and logic. Children counted syllables to identify what words were longer and explored the musical pattern of songs that they learned. Some children seemed drawn to

the tasks of counting, graphing, and detection of patterns within texts they were reading, often taking a very active role during the initial calendar activities which occurred each morning.

Children demonstrated their spatial intelligence through the use of props and manipulation of letters and words. Certain children enjoyed working with puzzles, manipulating pictures of story characters, and using puppets to re-tell a story to their friends. Bodily-kinesthetic intelligence was evident in most activities that accompanied music due to the fact that these activities often included hand movements, actions, or dancing. Children were given opportunities to respond to music by creative expression of movement. Several of the children immediately moved once a song was turned on by swaying, tapping their foot, or clapping. Children moved their bodies to a steady beat as well as challenging rhythms, frequently crossing the mid-line of their body. The practice of crossing the mid-line of the body, or bilateral coordination, supports a child's fine motor skill development helping in the use of tools for writing as well as the ability to visually track an object.

Naturalistic intelligence was most often demonstrated by the children sharing their great thirst for acquiring information regarding animals. Ben was extremely motivated by any text or song that involved an animal and he frequently offered insight or factual information during class discussions to share his great knowledge about animals. He could explain the difference between alligators and crocodiles; he could differentiate between spiders and bugs; he shared interesting facts that he knew- such as the fact that cows had multiple stomachs. The children looked to him as an expert on nature, specifically the animal kingdom.

Interpersonal intelligence was demonstrated by those that gravitated toward literacy activities which were most often socially constructed when the children worked together to accomplish a task. They were comfortable asking and receiving help during reading and writing tasks. These tasks often included music, such as playing a song, using the Orff instrument, or singing. Intrapersonal intelligence was evident as children aesthetically responded to music and were asked to articulate what they liked or didn't like regarding literacy and music experiences at school and at home. Data collected during the interviews with children noted that specific children had a deeper understanding about why they liked certain songs and books and carefully reflected upon their feelings and beliefs about music and stories.

Berninger (2002) identified five critical brain functions needed for literacy development, all of which were identified as evident in musically integrated experiences observed during this study. Those functions include sensory, motor, aural/oral language, cognition/memory, and attention/executive functions. Music engaged the sense of hearing through variations in dynamics, tempo, and timbre. It engaged the sense of sight as children watched the notes and identified meaningful symbols. Motor skills were engaged as children moved in response to music or moved played music. Patting their legs to the beat of the music provided a kinesthetic response to the music. Their dancing and hand gestures to accompany music provided them with a connection of motor skills to melody and rhythm. Through the singing of songs and listening to music children engaged the cognitive systems of aural/oral language. They generated new verses to rhyme and played with the sounds of language.

To exemplify the engagement of the brain functions as identified by Berninger (2002), one could consider a daily activity which occurred in the classroom, a song accompanied with a 'dance' or movement- the singing of Dr. Jean's "Macarena Months". As children heard the music begin to play, their *sensory* system was engaged. Their *motor* skills were activated as they began the Macarena dance, extending their arms, moving feet to the beat, and touching their opposite shoulders. Their arms crossed the midline several times during this dance and at the end of each phrase the children jumped and turned around. *Aural/oral language* systems were activated as they sang the names of each month and the *cognitive/memory* system was engaged as they re-called the months in sequential order. Their *attention/executive* functions engaged as the students had to concentrate on several tasks at once, while not being distracted by others engaged in the task.

It appeared that children used music to help them remember things, such as the sequence of the days of the weeks or months of the years. Cognitive memory was enhanced through repeated rehearsals of information placed in the context of a song. Smith (2005) had noted a strengthening of response when information was placed with a song and that was noted at times during assessment opportunities. Mrs. Miller allowed children to sing responses to assessment prompts, stating that her experience had shown her that this was helpful to them. This behavior supports the research conducted by Colwell (1994) which determined that music can be a facilitator of verbal or semantic memory.

Mrs. Miller used music to focus attention by singing a quick song, usually with actions, to provide an opportunity to expend some energy and re-focus children on a task.

Music was also used to alleviate stress during specific times of the day. Mrs. Miller's use of lullabies appeared to relax the children renewing them for the second half of their day. Music was also used to transition children between activities throughout the day, providing a quick cue to what was to come next.

Music was found to support literacy instruction in all six components of literacy. Activities to support this learning did not just occur frequently in the kindergarten classroom, but also in the music education classroom. Gromko (2005) studied instruction that encouraged an understanding of steady beat, word rhythm, and high and low pitches - all of which were explicitly taught to the children in this study. Her study identified that an active music-making experience accompanied with sound/symbol reading may help students develop cognitive processes that may help them attend to individual phonemes in words. Research conducted by Sousa (2005) extended these findings to include texts when he reported that if a child hears rhyming songs and is read to from rhyming books, practices observed frequently during this study, the child's brain begins to identify the sounds that comprise language. If a child enters school with weak phonological understanding, it is imperative that teachers assess the child to design strategies to provide this instruction. He continued to state that with proper instructional interventions, the brains of young struggling learners and dyslexic readers can respond to process in a way that more closely resembles a typical reader.

Data analysis determined that while all six literacy components were addressed in both classrooms, the focus of components varied between the classroom teacher and the music educator. The largest percentage of the literacy events facilitated by the classroom teacher was noted to be in the area of phonemic awareness and phonics (combined

percentage of 42%). These components are often an area of focus in early literacy instruction. It was further noted that while comprehension (18%) was still a strong focus, the smallest percentage of incidences occurred in the area of fluency (13%), vocabulary (14%), and concepts about print (13%). The music educator, however, had the largest percentage of incidences occurring in the area of fluency and vocabulary (combined percentage of 52%), with a smaller percentage of instructional incidences pertaining to phonemic awareness, comprehension, and concepts about print (each with 14%). The smallest percentage of incidences occurred in the area of phonics instruction (6%). It would appear that the instructional focus of the classroom teacher serves to complement the instructional focus of the music educator.

Music was integrated within the context of literacy instruction in multiple ways. It engaged students in the learning of content and provided a way for them to explore the rhythm and rhyme of language. Music supported literacy learning in all six components of literacy instruction while celebrating the unique cognitive strengths of each child.

3. How do a classroom teacher and a music educator view connections between music and literacy practices of young children?

The classroom teacher and the music teacher both shared their consensus view that music is extremely valuable in the context of teaching young children. They both appeared to share an understanding that learning is dynamic and experiential learning is powerful. Mrs. Miller stated that vocal music was not her strength, yet she continued to use it to engage children throughout the day. She used many professionally recorded CDs but did not hesitate to sing without musical accompaniment.

Ms. Lyon shared her understanding that meaningful learning opportunities occurred through the use of books to support her music curriculum, and she provided opportunities for children to demonstrate their understanding about tracking of print. It was insightful to watch children involved in intentional one-to-one tracking of print as an instructional task in the context of the music education classroom. As children demonstrated their ability to point to the print, the others had to follow along, reading accurately in order to play their instruments. Ms. Lyon's personal experience, having a mother who is a kindergarten teacher and uses music to support the learning of children, likely played a factor in her belief in the importance of the classroom teacher's use of music.

It was noted that the classroom teacher and the music educator used many of the same materials and resources to facilitate their instruction. However, there were differences in that instruments were only used in the music classroom, while writing was only done in the kindergarten classroom. I found it interesting that while the use of oral/aural experiences occurred in to each setting, the expressive procedural experiences did not.

The mentorship provided by administration for Mrs. Miller to serve as Ms. Lyon's mentor provided another opportunity for each teacher to articulate an understanding of the goals and objectives each one had regarding both music and literacy. Although the experiences children had in each setting were very different, both educators allowed children to explore and build upon prior knowledge. The teachers supported the new learning with cues and review to make meaningful connections. Each teacher facilitated the learning experience with opportunities for children to interact with one another and

with the teacher to affirm their understanding of new information or bring forth questions that they had. Fosnot (2005) refers to this as “reflective abstraction” which allows children to work with each other to challenge their own understanding and encourages a dialogue with one another to solidify a sense of community. Many of the musically integrated experiences caused children to work together to attend to a task, whether it was singing a story/ song, exploring movement through music, or identifying the number of beats in the names of the children in the class. This socio-cultural experience provided the children with an opportunity to grow in their ability to dialogue with one another and work collaboratively.

Mrs. Miller and Ms. Lyon both expressed their appreciation of what could be gained through collaboration. Having an opportunity to share with one another to best meet the needs of the children was a priority for each one of them. They recognized that when they collaborated the results were beneficial for their young students, yet acknowledged that there was a need for additional time for this to occur. These two teachers appeared to recognize and value the developmental stages of young children. They worked to scaffold learning experiences to help children master curricular objectives. Their choice of fun and engaging songs helped motivate children to participate.

Children were exposed to multiple genres of literature and a variety of musical styles. This connection of genre/style provided an interesting perspective on ways teachers can provide multiple experiences to celebrate the unique interests of their children. In the kindergarten classroom, Mrs. Miller exposed children to many types of expository texts and narrative texts. Although the genre of poetry was not addressed as

such in the kindergarten classroom, rhyming and repetitive texts were used frequently. I found it most interesting that if one looks at a song, poetry is often the style of the lyric. What appeared to not be addressed in traditional text was being addressed through song.

The classroom teacher and music educator shared many of the same thoughts regarding the ability of music to support the literacy practices of children. Both expressed that music is an effective means to engage children in experiential learning. They also noted that one does not have to be a skilled music professional to effectively use music in the context of literacy instruction. Skillful use of materials and resources along with purposeful collaboration and communication were identified as essential tools for meeting the needs of young learners.

4. How do kindergarten children perceive connections between music and literacy experiences in the classroom?

Data analysis of guided conversations with children determined that they associated music and literature with fun, friends, family, and learning. They saw repetitive rehearsals of reading text and singing of songs as purposeful and articulated that they viewed it as a way to improve performance. Engaging in music was a socially constructed event that caused them to work together toward a common goal. Children utilized some of their reading strategies as they demonstrated tracking of print and other basic concepts about print while in the setting of the music education classroom.

Music was incorporated into their lives during and beyond the school day. They associated music with entertainment as well as instructional purposes. They spoke of listening to music in various contexts for entertainment such as musical scores, music used in computer programs, and the enjoyment in composing music with friends and

family. They could articulate the types of music, converse about various instruments, share their preferences about music and books and provide a rationale for their preferences. In these conversations children often associated music with movement and most spoke favorably about this aspect of the classroom experience.

The kindergarten children spent several weeks preparing for a program that was performed at the end of the year. This program incorporated choral reading, solo reading, and singing to convey a message for the audience. Although the preparation determined somewhat the instructional format for several weeks of instruction, the program provided the purpose for the repeated rehearsals of text and song. The music program motivated the children to learn the speaking parts, songs, and dances.

Children shared their understanding that music is a purposeful part of their instructional day. They articulated that music helped them learn and helped them prepare for sharing what they knew with others. Music was determined to be a part of their academic and non-academic day.

Conclusions

Children enter primary classrooms having various literacy experiences. Meaningful experiences that demonstrate how reading and writing are important in our lives can help to motivate children to engage in literacy tasks. Teachers must be supportive of the early literacy attempts children make and provide a nurturing environment that establishes a culture that encourages children to take risks and to attempt to challenge themselves. The following conclusions have been drawn based on my interpretations of the findings of this qualitative case study exploring the role of music in early literacy learning.

- 1) A supportive school/ classroom environment allows children to focus on the task of literacy learning
- 2) Balanced literacy instruction is key to optimal early literacy learning
- 3) Music is a critical component of effective literacy instruction
- 4) Integration of literacy and music is facilitated through collaborative communication.

First, one must recognize that children can focus on the task of learning when they realize that they have the ability to succeed at a task, that the task is meaningful, and that those surrounding them have the will and the skill to help them be successful. A supportive environment of caring individuals who take the time to connect with individual children through building upon their interests and abilities will provide a framework of support to enhance their willingness to take risks that will lead to learning.

Secondly, balanced literacy appeared to be the key to providing an optimal early literacy environment. It is through quality literature and authentic experiences in reading, writing, listening, speaking, and visual representation that children practice the skills and strategies they need to effectively learn from and communicate with others. The effective teacher recognizes that he/she must remain responsive to the needs of the individual children in his/her classroom and seek to engage them in tasks to motivate them towards self-directed exploration of all forms of written and oral language. Oral language is a critical piece of the literacy puzzle. It is more than a tool for communication, but is a resource children use to construct meaning and deepen their understanding. As oral language is supported, phonemic awareness and phonics instruction provide the building

blocks for early literacy learning, in addition to fluency, vocabulary, comprehension, and concepts about print.

Third, music must be recognized as an effective avenue of literacy learning, appropriate for the emergent abilities and skills of young children. Mrs. Miller and Ms. Lyon provided a variety of engaging activities that challenged the children, yet were developmentally appropriate for their young learners. This was essential to the continuing development of these young readers and writers. According to Ehri and Roberts (2006), it is vital that teachers ensure that preschool and kindergarten children gain control of these foundational skills in ways that are developmentally appropriate. They state that first and second grade classrooms are filled with children who lack this foundation, and due to this have great difficulty building key reading skills as tasks become increasingly more difficult. In this study children were allowed to make choices based on their interests and were encouraged to work with one another to build meaning within their learning tasks. Children's work was celebrated and honored through the teachers allowing children to share their story or play for others. It was noted during data analysis that the rare 'synthetic' experience was easily coded into one of the six literacy instruction categories. However, authentic opportunities to read and write integrated several components of literacy instruction and were deeply engaging to the children.

Music was determined to be a critical tool for effective literacy instruction, both in the context of the kindergarten classroom as well as the music education classroom. Data analysis provided insight regarding how the classroom teacher and music educator can complement one another in addressing the components of effective literacy instruction. The incidences of literacy instruction that the classroom teacher focused

upon to a greater extent (phonemic awareness and phonics) were not as heavily addressed in the music education classroom. The components of fluency and vocabulary were the strength of the instructional incidences in the music classroom, indicating that these teachers complemented one another to provide an optimal early literacy learning experience. The focus of these components of effective literacy instruction would appear to be consistent with the definition of a high quality literacy program as defined by the National Reading Report (2000).

It would appear that music instruction should not be viewed as ‘a special’ or something which students do in addition to other core subjects. Music should be recognized not only for the valuable and rigorous curricular subject it is, but also for its ability to facilitate literacy learning. Data analysis and reflection determined that music provided opportunities to support phonemic awareness, phonics, fluency, vocabulary, comprehension, and learning focused upon concepts about print. Each one of these instructional components was found to be addressed through the use of music both in the regular classroom and in the music education classroom and are considered essential according to the summary of research findings related to exemplary practice identified by the Center for Improvement of Early Reading Achievement (Armbruster, Lehr, & Osborn, 2001).

Finally, one could infer that collaboration is essential to achieve optimal results necessary to meet the needs of all learners. There must be an expectation of communication between educators and willingness for each teacher to serve as a support network for other teachers to best utilize the resources of a school. Frequent and purposeful communication is beneficial to providing a cohesive early literacy program in

which the music educator is considered an integral part of the literacy instructional team. In that way, teachers can serve to complement one another while merging the best of instructional practice.

Implications for Classroom Teachers and Music Educators

Music is a powerful tool for facilitating literacy learning. Teachers are continually seeking ways to meet the needs of students with differing abilities and interests. Teachers must recognize that children are a generous audience and it does not require a skilled music professional to engage children in musical tasks to support their literacy learning. There are musical artists and composers who specialize in music used for instruction and those resources often are accompanied with lesson plan ideas and suggestions for implementation in the classroom. If teachers choose not to utilize commercial materials for this purpose, they can still easily pair content with a familiar tune to provide learning through a common melody.

Teachers must be consistent in implementation of a program to expect to see the desired benefits. As Ehri and Nunes (2002) reported, a critical factor leading to successful implementation of strong phonemic awareness instruction is teacher commitment to the teaching of phonemic awareness within the context of the reading program. Teachers will note greater gains when they make experiences meaningful, maintain a focus on the learning objective, and provide the children with clear expectations. In addition to the expectation for literacy learning, teachers must provide students with the time needed to practice these critical early literacy behaviors. This begins with an intentional focus of educators supporting the oral language development of children. Teachers must model strong oral language skills, including grammar,

expression, and rate. Children then need time to practice conversational skills throughout the day to express their ideas as they engage in learning tasks.

Teachers are encouraged to re-evaluate the classroom environment and note opportunities during the school day when music can be integrated within the context of an instructional event to heighten the engagement of students in literacy learning. Helping children attend to the sounds of language builds their phonemic awareness, the building block for future literacy learning. The use of word play and rhyme allow children the opportunity to explore the sounds of their language. That must be followed with providing young children with time to internalize the phonics rules necessary to master standardized spelling; time to read and be read to, as they increase their oral and written vocabulary; time to practice repeated texts to build fluency; time to ponder and consider the meaning of text; and time to absorb the details of how print works and how reading occurs. Children must be provided time to read, write, listen, sing, draw, and speak during their school day.

Classroom teachers should view their young students as readers. This can be supported in playful ways, such as asking children to recite nursery rhymes, poems, and songs together. Children must be provided with daily opportunities to use their literacy skills for authentic purposes. Mrs. Miller reinforced this perception of her students' abilities through her verbal comments providing feedback related to their literacy performance. *I like what I'm seeing!... Good readers try to catch their mistakes... good readers use the pictures... good readers get their mouths ready to read... good readers ask if this makes sense.* These comments were made after she had observed the children

exhibiting targeted behaviors and reinforced that she believed in them and their ability to be competent readers.

As music educators introduce songs to children, it is critically important that they take the time to attend to the children's comprehension through vocabulary exploration. Time taken to teach a song is not time well spent if children don't attach meaning to the words they are singing. Teachers must foster children's desire to explore unknown words and scaffold their understanding by attending to the theme and main ideas portrayed in a song. By examining additional 'teachable literacy moments' the music educator can support children's literacy learning while building their musical conceptual understanding as well. The experienced music educator is a valuable resource for the classroom teacher and classroom teachers should be encouraged to seek out the expertise of the music educator to open communication for collaborative efforts.

It is critically important that time be spent exposing children to multiple opportunities to hear and engage in the reading of quality children's literature. Additionally, through purposeful experiences, listening skills can be enhanced. As children learn to love the sounds of their language teachers can include planned activities to improve listening skills activities such as:

- Ask children to echo back a clapped rhythm, increasing the difficulty of the pattern as they gain in skill.
- Sit out-of-doors and try to differentiate the sounds heard.
- Play a listening game, such as Simon Says, to emphasize careful listening.

- Play tapes of environmental sounds of the voices of classmates and challenge the children to guess the sound/person.
- Set a purpose for listening prior to a read-aloud as an oral anticipation guide for information for which children will be listening.
- Play various styles of music and ask children to discriminate between the styles such as march, polka, lullaby, waltz, etc.

As classroom teachers and music educators collaborate, a mutual sharing of the individual teaching standards relevant to literacy and music can provide a context for dialogue regarding shared and supportive practice. Regularly scheduled collaborative planning meetings provide the ideal opportunity for this type of communication. If this is not feasible, then electronic communication or sharing of curriculum goals and objectives with one another would provide a start, a beginning of a shared conversation regarding the intersection of literacy and music. Finally, teachers must allow themselves time to reflect upon their practice to continue to make instructional decisions to best meet the needs for young literacy learners.

Implications for Administrators and Policymakers

Strength of the classroom literacy program in this study was found in the support provided by school and district administration. Administrative decisions were made after consulting current research prior to careful planning. The commitment of funds to provide qualified reading assistants in support of the guided reading program was evidence of this support. The provision of materials and the support of faculty and staff in receiving quality professional development was a bold statement of support as well. Phonemic awareness instruction is supported by research conducted by Ehri and Nunes

(2002) which noted that phonemic awareness instruction is best delivered during the preschool – second grade years. It is in the best interest of children to support early literacy instruction with the focused effort of a trained teacher who recognizes the value of phonemic awareness instruction during the early years. Therefore, administrative support of professional development is crucial to student success.

Administrators must also recognize the value in collaborative efforts of staff members to meet the needs of all children. Time is needed to facilitate these collaborative efforts. Support of scheduled planning opportunities must be provided through the use of creative scheduling or financial support provided through necessary hiring of substitute teachers to allow for this collaborative experience to occur.

As districts work to demonstrate improved student performance in the climate of No Child Left Behind, administrators must be willing to advocate for the value of the music programs in our elementary schools as a resource for exemplary literacy programs. Music education provides yet another venue for engaging young children in learning about language, history, and culture. Information provided by professional organizations such as the International Reading Association (IRA) and the National Association for Music Education (MENC) should be examined and shared with teachers and school policy makers prior to making decisions regarding policy and funding opportunities to best meet the needs of all children.

The most current research that is available on early brain development speaks to the critical importance of the experiences and interaction young children have with their environment. Administrators and policymakers must recognize that young children learn through active engagement and demonstrate what they know in multiple ways, ways that

are not easily measured on standardized tests. Children should be actively participating in the work of learning and teachers must be actively seeking authentic ways to assess what children know, with the support of administrators who serve as advocates recognizing the developmental needs of young learners.

Recommendations for Future Research

The intent of this study was not to generalize, but to deeply explore the role of music in early literacy learning as exemplified in a kindergarten classroom and music education classroom. In consideration of the data that were collected and analyzed for this study regarding the role of music in literacy instruction, several suggestions for future research can be offered.

Literacy instruction can be delivered in many ways. The use of guided reading and Animated Literacy™ set the instructional context for this specific case study. It would be interesting to explore how other methods of instruction might or might not influence the role that music plays in the context of instruction. Additionally, this site was purposefully selected due to daily music instruction and its full-day kindergarten program. Other models such as half-day kindergarten models or music instruction that only occurs two to three times per week may provide interesting comparative data for analysis in future studies. In a study completed by Gromko (2005) gains were noted in reading interventions that included the use of focused music instruction provided weekly. How much more powerful might those interventions be when music instruction occurs daily?

Future research could provide further insights regarding the phonemic awareness of children exposed to a daily high quality daily music education program focused on

identification and manipulation of phonemes. A quasi-experimental study could be conducted to compare the phonemic awareness of children who had participated in a daily music education class focused on phonemic awareness activities and those who had received music instruction without this focus. A comparison of these gains and analysis of these data could provide a greater understanding of effective models for literacy and music education programs.

The current technology, although expensive, can allow researchers to garner information regarding how struggling readers can benefit from literacy programs that utilize gesture, music, and gross motor movement. The use of FMRI, when economically feasible, can provide future researchers with vast amounts of information regarding how young children's brains process information differently when carried through the tune of a song, or learned in non-traditional ways. This research can guide pedagogical practice to best meet the needs of children who may be challenged by more traditional methods of literacy instruction.

Research completed by Hatcher, Hulme and Ellis (1994) identified the benefit of phonemic awareness activities in a structured reading intervention program. Their research was conducted in the context of a Reading Recovery™ program, which is a program for first grade intervention. An interesting extension of this research would be to follow the children identified in a kindergarten program into their first grade placement to identify how music is used to support the literacy instruction of those who qualify for the Reading Recovery program.

This study was limited to the study of kindergarten children. Future research is needed to explore how teachers in grades beyond kindergarten use music to support

literacy learning. As children become older, it often appears that teachers choose to use less and less music in the context of instruction. This is of interest, due to the fact that as children become older they often become more engaged in music outside the classroom (i.e. teenagers). An exploration of this phenomenon might help all teachers, K-12, to explore new ways to meet the needs of students who may become motivated or engaged through the integration of music with instruction.

It was evident in this study that music was used to deliver content information. Additional research to explore how elementary teachers integrate music into instruction in the areas of math, science, and especially social studies would provide insights regarding instructional practice. History has been recorded through music. Music has been an element of every culture known to man, so deeper exploration of the intersection of music within the content of social studies would perhaps guide teachers to use music purposefully to build student's knowledge of themselves and others. Research of how music serves to define one's culture can provide a window into the diversity of learners. A study conducted with a more diverse racial and/or ethnic population may provide insight regarding how music may be perceived differently due to cultural influences.

To conclude, additional research is suggested to explore how various designs of reading/ music education models of instruction and intervention can complement and support the literacy learning of children; how music can be used to facilitate literacy learning beyond the kindergarten year of instruction; and how all curricular areas can benefit from integration of music to increase academic content knowledge, as well as how connections can be made between music and multicultural education.

Final Thoughts

The children and teachers observed during this study provided a small window into the ways music can touch the academic soul of our students. Music is a constant in the lives of adults and children alike. From the jingles heard on the television to the sound effects of a video game, music surrounds adults and children on a daily basis. Just as children and adults may commit to memorize poetry, the lyrics of a childhood song can linger in our memories for years. Music would appear to be a gift to the educator. Just as a well-crafted story, a well-crafted song can deepen our understanding of the world in which we live.

Teachers make thoughtful daily instructional decisions about how to best meet the needs of children. They determine the materials, strategies, and techniques to design instruction that is engaging and motivating for children. Music may serve to be the avenue to motivate and encourage young children on their journey towards literacy. We can learn a lot about what is important by observing and listening to children. Ms. Lyon shared David McPhail's book, *Mole Music*, during music class. In response to that book, Makayla wrote the following note to me when back in her kindergarten classroom, "*My favorite Book is Mole Music because. I like music. It makes me feel graceful and free.*" Our children deserve to respond to literature and music that has the ability to make them feel . . . to feel intelligent, special, loved, graceful, and free. Utilizing the power of music to serve our children in the learning of literacy skills and strategies will provide them the opportunity to communicate their knowledge and understanding of the world in which they live.

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Music

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Appendix A - Pilot Study Documents

A-1 Timeline for Pilot Study

| | | |
|----------------------|-----------------|--|
| 10/16/06 | | Contacted principals of four Professional Development schools: School A, School B, School C, and School D to request the opportunity to observe. |
| 10/20/06 | | Made contact with teachers to request their participation by allowing me to observe for a 2-3 hour period during their typical day, to include literacy learning |
| 11/2/06 | 12:00 – 3:00 PM | Observed & Interviewed Teacher #1 at School A for 3 hours |
| 11/06/06 | 8:30 – 11:30 AM | Observed & Interviewed Teacher #2 at School B for 3 hours |
| 11/09/06 | 12:20 – 3:10 PM | Observed & Interviewed Teacher #3 at School A (2.75 hours) |
| 11/13/06 | 8:40 – 11:00 AM | Observed and Interviewed Teacher #4 at School C (2.25 hours) |
| 11/20/06 | 8:30 – 11:30 AM | Observed and Interviewed Teacher #5 at School D (3 hours) |
| 11/23/06- 12/3/06 | | Explored coding methods and revised Interview questions to be used in the study. |

A-2 Pilot Study Consent Form

PROJECT TITLE: The Role of Music in Early Literacy Learning: Pilot Study

PRINCIPAL INVESTIGATOR: Dr. Marjorie Hancock

CO-INVESTIGATOR(S): Laurie J. Curtis, 214 Bluemont Hall, ljcurtis@ksu.edu

CONTACT NAME AND PHONE FOR ANY PROBLEMS/QUESTIONS: Dr. Marjorie Hancock
246 Bluemont Hall, 785-532-7304, mrhancock@ksu.edu

PROCEDURES OR METHODS TO BE USED: Researcher will be observing in the kindergarten classroom during literacy instruction. No student names will be identified during this study. During the writing of this report names will be protected. No video-taping will occur. Brief teacher interview will be audiotaped in order to assure accurate recording of teacher comments. Date and time of interview will occur at a time mutually agreed upon by teacher and researcher.

LENGTH OF STUDY: Fall 2006 (a single 2-3 hour observation and brief teacher interview)

There are no anticipated risks from this study. No intervention is to be implemented. This pilot study is observational in nature and researcher will be an observer, not a participant.

TERMS OF PARTICIPATION: I understand this project is research, and that my participation is completely voluntary. I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name:

Teacher name

Participant Signature:

Date:

Appendix B - Support Materials/ Coding Samples

B-1 Observational Fieldnotes

(Taken March 5, 2007) On the marker board is a **note** to the class;

Dear Mrs. Meyer's Class,

I have a big red dog.

Can you guess who it is?

Love,

Emily Elizabeth.

"Some of you were asking me about the letter up here." Billy told me he thinks that he knows what it says. Let's see if you **can read it with me**". The children **read chorally** as the **teacher points with the pointer**. When she gets to the words **Emily Elizabeth**- the students raise their hands. MM takes out a **big stuffed Clifford**. She tells them that she will put him in the reading area, but they will need to be gentle with him. "How many of you think you can treat him gently...." They all agree they can do that. She **reads them the book Clifford, I Love You**. The teacher reads the book straight through. The children watch the book attending. In the book **Emily decides to write a "happy song"** about Clifford. MM **sings the book** when she gets to **the song in the book and claps**. The **children begin to clap the rhythm** with her. They don't know the words- but like to clap the rhythm. During the refrain...**It's Clifford...some of the children start to add in the words**. Seth shuffles in dragging his back pack. The teacher waves quickly- but goes right back to the song she is in the middle of singing. He wanders towards the group, goes back to the rack and hangs up his backpack. He smiles at me when he sees me motioning for him to come

Choral reading
Fluency
CAP
Tracking Print

Use of prop

Characters
discussed
Comprehension

This is a different way to share music than I've seen her use before- it is taken from the text of the book- the score is integrated into the book. She does not seem concerned to not have "music" from a CD- and the children don't mind either.



Clapping rhythm
Fluency

back to hang up the backpack. He shuffles a complete circle back to his chair to hang up his coat. **The teacher has finished singing the song by herself and tells the children that they are going to sing it together now.** The children join in the singing of the song.

Children repeat:
Fluency

Think-aloud-
mental modeling
about how to
begin a story
with a main idea.
Comprehension

...main idea- what my story is going to be about. And it has to go with the picture doesn't it? (The teacher shows a paper that has Clifford inside a heart with writing lines below the picture)." The students give ideas about what a story might be about using this paper. The teacher then begins to model the writing of the story. "I'm going to begin with I, and we always need that to be a capital letter...I love...and I'm going to write Clifford- what do we need...a capital letter...why? I love Clifford. What do I need at the end of this sentence? (Teacher talks about the space between words. The children offer their suggestions for the story.

So much
instruction
occurring here-
CAP
Comprehension
Phonics
Phonemic
Awareness

He is red (the teacher walks them through the **sounding out of words**. The students know how to spell is.

He is nice..."**help me spell nice....n...i...s** "that is just great if you want to **use your kindergarten writing, because you hear the /s/ sound**...but if I was going to write it I would write it with a c...and then I would put that **bossy e** on the end of the word- **to make that /i/ say /i/.**
The occupational therapist comes in and visits with the para regarding Brandon. He stays in the room and they sit now on each side of Brandon as he begins to write his story.

Encouraging of
invented spelling
in a supportive
manner- yet
realistically
letting the
children know
that there is a
standard
spelling- but that
their risk taking
is valued.

The story continues...He wags his (the children help in the spelling of the words) tail...remembers that rule "**two (end of sample transcript)**

B-2 Example of Data Coding Sheet

Focused Coding Grid

| +♫ | -♫ | CT | ME | Coding/ Sub-coding | | Description of Event |
|----|----|----|----|-----------------------|----------------|--|
| | | | | CX | CD | |
| X | X | X | X | WG CT IP | CAP | Use of pointer to track print |
| X | | X | | WG | PAI F | Singing songs while using Animated Literacy gestures in isolation (“Who Let the Letters Out?”) |
| | X | X | | IP | PH/ OR V | Children make onset/rime wheel. They provide meaning of words they make |
| | X | X | | GR | F | Children asked to whisper read when reading instructional level text |
| X | | | X | WG PW | CAP | Children read (L-R) color codes to play boomwhackers (Starlight/ Starbright) |
| | X | X | | GR | PA/ID | Children brainstorm words that begin with /ch/ |

| | | | | | | |
|---|---|---|---|----|---------------------------|--|
| | X | X | | WG | C | Children re-tell story with prompts for beginning/ middle/ end |
| X | | | X | WG | V C | Children listen to music that does not have lyrics. They are asked to share words they feel describe the music |
| | X | X | | WG | CAP | Teacher explicitly teaches exclamation mark. |
| | X | X | | WG | PA/I PA/B PH/ OR | Teacher shares big book Dog in Fog. Children identify initial sounds of words, blend sounds and then move to text reading. |

CODE:

+🎵 music used -🎵 music not used

CT classroom teacher ME music educator

CX context

WG = whole group CT = center time PW = partner work

IP = independent practice GR/SG = guided reading/ small group

CD literacy component code

PA = phonemic awareness

I = phoneme isolation

ID = phoneme identity

B = phoneme blending

S = segmentation

PH = phonics

OR = onset/rime

LI = letter identification

INV = phonics rules/ invented spelling

F = fluency

V = vocabulary

C = comprehension

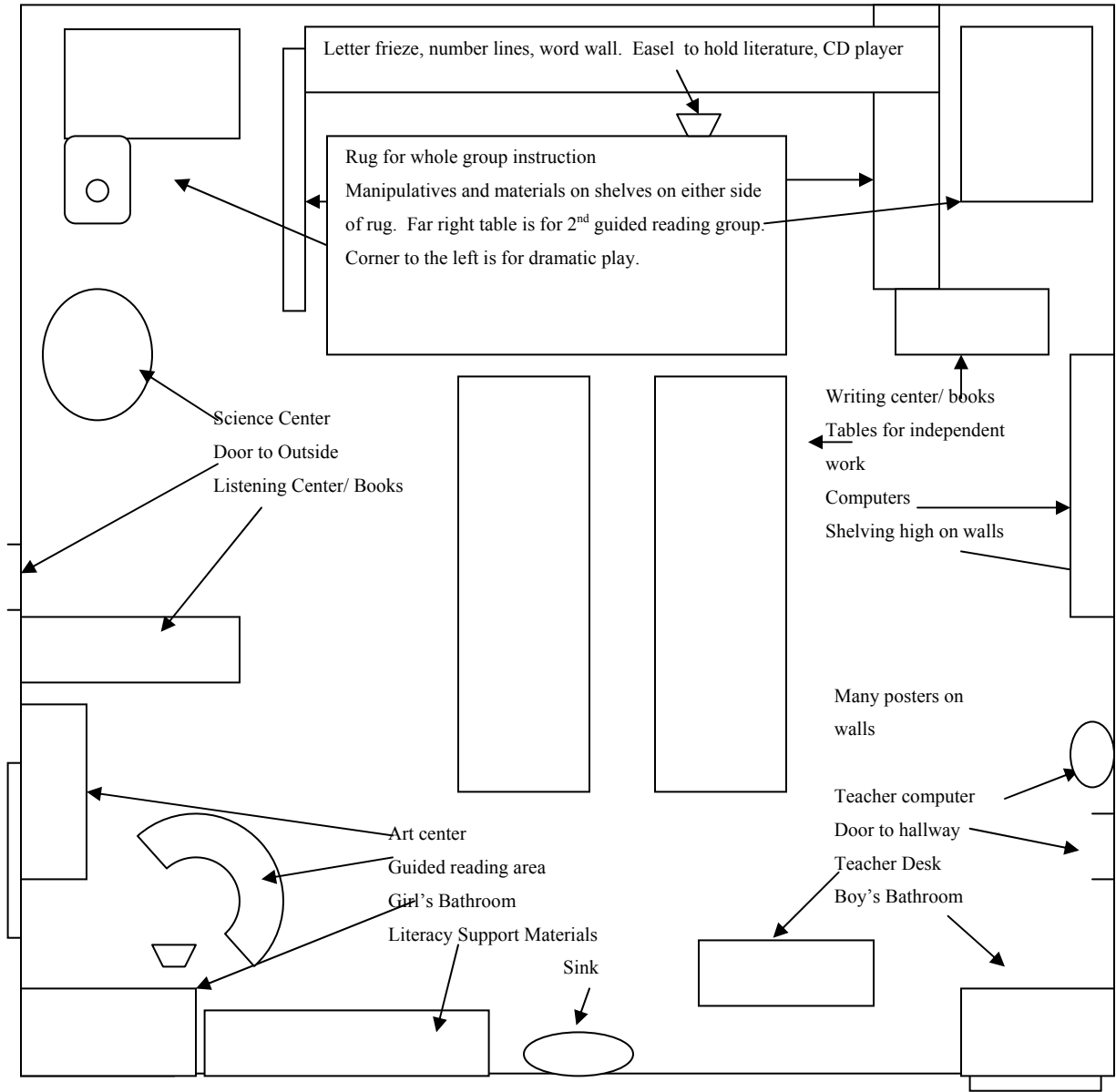
CAP = concepts about print

B-3 Data Analysis Related to Findings

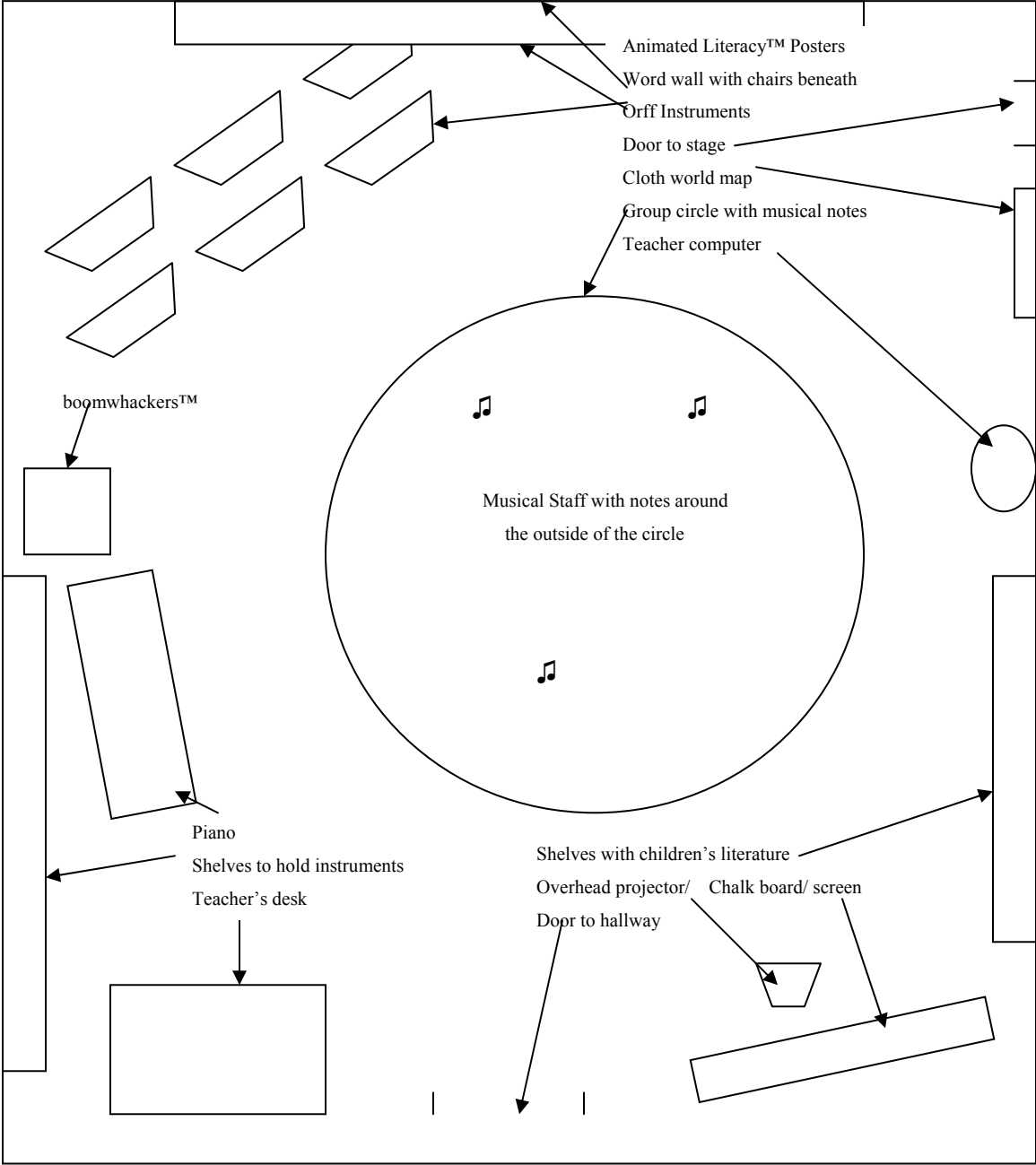
| | |
|--|--|
| Results Noted | Results were drawn from data which emerged through initial and focused coding/ and sub-coding related to identified materials as well as the context for instruction Components for coding * were identified by the National Reading Panel (2001) to constitute effective literacy instruction. |
| Literacy Environment | |
| <ul style="list-style-type: none"> • Caring • Conversations • Connections • Collaboration • Consistency | Emerged through: <ul style="list-style-type: none"> • Observational fieldnotes-/sub-coding of materials and context of instruction • Interview transcript analysis • Video transcript analysis • Planning documents • Parent information documents • Schedule of instructional day |
| Intersection of Practice/ Pedagogy | |
| <ul style="list-style-type: none"> • Gradual Release of Responsibility | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis |
| <ul style="list-style-type: none"> • Metacognition | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis |
| <ul style="list-style-type: none"> • Sharing of Quality Literature | <ul style="list-style-type: none"> • Observational fieldnotes/ sub-coding of materials and context of instruction • Teacher’s interview transcripts • Video transcript analysis • Lesson planning documents • Diagrams of classrooms |
| <ul style="list-style-type: none"> • Support of Oral Language | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Schedule of daily activities |
| <ul style="list-style-type: none"> • Active Engagement/ Gesturing | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Teacher’s interview transcripts • Children’s interview transcripts |
| Integration of Music/ Literacy Related to Instructional Components* | |
| <ul style="list-style-type: none"> • Phonemic Awareness | Coding/ sub-coding of: <ul style="list-style-type: none"> • Observational fieldnotes |

| | |
|---|--|
| | <ul style="list-style-type: none"> • Video transcript analysis • Children’s writing artifacts |
| <ul style="list-style-type: none"> • Phonics | Coding/sub-coding of: <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Children’s writing artifacts |
| <ul style="list-style-type: none"> • Fluency | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Parent information documents • Teacher’s interview transcripts |
| <ul style="list-style-type: none"> • Vocabulary | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Children’s interview transcripts • Peabody Picture Vocabulary Assessment results |
| <ul style="list-style-type: none"> • Comprehension | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Children’s writing artifacts • Children’s interview transcripts |
| <ul style="list-style-type: none"> • Concepts About Print | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Children’s writing artifacts • Parent information documents |
| Children’s Perception of the Role of Music | |
| <ul style="list-style-type: none"> • Repeated singing/reading is meaningful | <ul style="list-style-type: none"> • Children’s interview transcripts |
| <ul style="list-style-type: none"> • Music is linked to movement | <ul style="list-style-type: none"> • Observational fieldnotes • Video transcript analysis • Children’s interview transcripts |
| <ul style="list-style-type: none"> • Preferences occur regarding text and music | <ul style="list-style-type: none"> • Observational fieldnotes • Children’s interview transcripts • Teacher’s interview transcripts |
| <ul style="list-style-type: none"> • Children engage in music within and beyond the school day | <ul style="list-style-type: none"> • Children’s interview transcripts |
| <ul style="list-style-type: none"> • Variety of genres and musical styles are enjoyed | <ul style="list-style-type: none"> • Observational fieldnotes • Teacher’s interview transcripts • Children’s interview transcripts |

B-4 Kindergarten Classroom Design



B-5 Music Education Classroom Design



B-6 Kindergarten Team Collaboration Sheet

Week 33 April 16-20, 2007
(April 16 Kindergarten Round-Up, Subs in rooms)

Shared Reading: Gogo's Goat 1TA-1AF, 1AK, 1AM, 1AN

Handwriting: Review letters 4AB-4AH

Reading: O#80 (long i, fly & pie. Label, cut & paste)
T#101 (Draw and write sentences about a goat)
O#81 (long i, bright & light. Label, cut & paste)
T#108 (Draw and write sentences about a well)
O#82 (short & long i. Label, cut & paste) 1P-1AF,4AA

Writing: #125 ape & skate
#127 train
#130 shell, pail, snail

Word Chunk: ug
Billy the Bug's New Jug (word family tale)
Baby Bug (big wheel book)
Zug the Bug's Big Book
A Bug (emergent read & write book).
Bug Stationary
Bug Word Wheel
White boards
Letter Necklaces to make chunk words
Magnetic Letters

Between the Lions: Farmer Ken's Puzzle **Show & Tell:** Free Choice

Math: Crawley Creatures Unit-Parent Letter. Add egg cartons to Christy's letter.

Lesson #1 Bugs Come to Class. Intro. by reading a book about bugs. Ex. The Very Busy Spider. Use plastic bugs to complete activities. Graph or group bugs by different categories; color, legs, wings, size. The lesson will take two days to complete. pg.510-512 (2.1.K5 4.2.K1b)

Lesson #2 Insect Problem Solving Intro. by reading Bugs by Nancy Winslow Parker & Joan Richards Wright or The Icky Bug Alphabet Book by Jerry Pallotta. Each child needs ¼ of an egg carton with three cups attached and pipe cleaners for legs. Discuss insect body parts and legs. Teacher needs transparency Insect Body Parts pg. 520 (1.2K3b 1.4.K1)

Lesson #3 Time for Bugs. Read The Grouchy Ladybug by Eric Carle, the children follow the ladybugs activities as the hands on a demonstration clock are moved in 1-hour increments. Children will need worksheet, Time for Bugs pg522. I believe we did not use worksheet pg 523, but used our big plastic clock and the little ones from either Joan, Roxie or Christy. (3.2.K3)

Writing numbers to 90 Data Collection Problem Solving (1.3.K1 1.2.K1 4.2.K1 4.2.A1)

Science: Finish Plants and seeds.
Stamps of parts of a flower Foam manipulative Books on seeds and plants on cart
Farm Animals: ?????

B-7 Plant Unit Planning Sheet

Spring Science Unit

Objective: **Determine what a plant needs to grow.**

Vocabulary: warmth, light, water, air

Big Book: Seeds Get Around by Nancy White

Book: How a Seed Grows by Helene J. Jordan

Emergent Book: The Seed Song by Judy Saksie

Science model: From Seed to Plant

Song: Green Plants

Activity: Science cut and paste – Children cut out pictures of bean plant and place in correct order of stages of growth. They circle pictures of what a plant needs for growing.

Objective: **Explore basic plant vocabulary.**

Vocabulary: seed, root, stem, branch, leaf

Big Book: The Vegetable Garden by Melvin Berger
I'm a Seed by Jean Marzolla

Emergent Book: We Can Eat Plants by Rozanne Lanczak

Song: Parts of a Plant

Other books: The Carrot Seed by Ruth Krauss

Objective: **Grow a seed in soil**

- Plant flower seeds in dirt and observe growth
- Review needs of plant in order to grow.

Science Model: From Seed to Plant

Book: A Seed is a Promise by Claire Merrill

From Seed to Plant by Gail Gibbons

Objective: **Plants make their own food.**

Video: Plants and Their Importance

Emergent Reader: What Does a Seed Need?

Objective: **Describe flowers and seeds as a food source.**

Describe farming process

- Some food comes from farms as crops.
- Farmers must take special care to protect their crops from weeds and pests.
- Crops are harvested, kept fresh, packaged, and transported for people to buy and consume.

Big Book: Growing Vegetable Soup by Lois Ehlert

The Farmer and the Beet by Addison-Wesley Co.

Books: Vegetables, Vegetables! By Fay Robinson

It's a Fruit, It's a Vegetable, It's a Pumpkin by Allan Fowler

Bread is for Eating by David and Phyllis Gershator

If It Weren't for Farmers by Allan Fowler (Shows a farmer spraying crops.)

Farmers by Dee Ready

I'm Going to be a Farmer by Edith Kunhardt

Video: Come to a Farm

All About: Old McDonald's Farm

Additional Resources and Activities

Manipulative: Root-View Farm

Books: A Weed is a Flower by Alik

Big Book The Tiny Seed by Eric Carle

Flower Garden

From Peanuts to Peanut Butter by Melvin Berger

Emergent Reader: Peanut Butter is Delicious

Activity: Plant-Part Pokey

Song: Green Plants (Tune: Row, Row, Row Your Boat)

Parts of a Plant (Tune of Wheels on the Bus)

B-8 Guided Reading Support/ Collaboration

When listening to your child read:

- **Do encourage your child to use pictures to help read words.**
- **Stress that your child point to the first letter of each word as it is read.**
- **Encourage our child to use beginning sounds to figure out the words** (For example, do decide if a picture is a dog or a puppy—look at the first letter of the word to read it correctly.)
- **Remind your child to think if a word makes sense in the sentence.**
- **Discuss the meaning of the story and relate it to your child’s life when possible.**
- **Have our child practice retelling the story, correctly sequencing what happened first, next, and last.**
- **Remember that at first your child may appear to be memorizing the text but he/she is learning concepts of print such as directionality and one to one matching through this process.**
- **Encourage him/her to show off reading skills by reading to family and friends!**

Other Concepts of Print

(These are other skills which could be reinforced to help your child. You might choose to focus on one of these skills after each book is read so as not to take away from the fun of reading the book.)

- Ask your child to point to a letter and name it.
- Help your child count the number of letters in a word and the number of words in a sentence.
- Have your child point to the first and last letter in a word.
- Ask your child to point to a capital letter (They sometimes confuse taller lowercase letters and call them capital letters.)
- Have your child point to a word. (Kindergarten children sometimes confuse the terms “letter” and “word”.)
- Have your child point to the first word and the last word on a page.
- Point out punctuation: period, question mark, comma, quotation marks. Ask your child to name these and tell what they mean.
- As our child becomes more confident, have him/her begin finding high frequency words such as the, to see, my, etc.

B-9 Example of Data Coding/ Materials

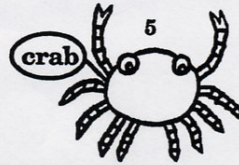
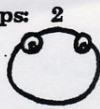
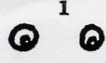
Materials Used

| +🎵 | -🎵 | CT | ME | Materials Used | Comments |
|----|----|----|----|---|---|
| X | X | X | X | Computer | Used Daily in KC |
| | X | X | X | White marker boards | K uses individual boards as well as for whole group instruction |
| | X | X | | Wide-lined illustration paper | Used daily |
| X | X | X | X | Posters to teach content information | Many used in both rooms. Children access the information |
| X | X | X | X | CD player | Used for music in both rooms |
| X | | | X | Orff Instruments | Usually played with partner |
| | X | X | | Rings of word cards (Fry). Children each have own set | Read individually |

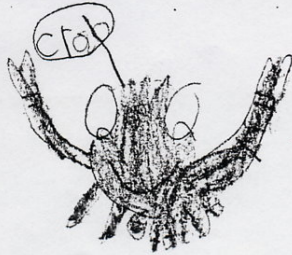
| | | | | | |
|---|---|---|---|--------------------------|---|
| | | | | | at quiet time of the day |
| | X | X | | Magnetic letters | Most often during guided reading or Center time |
| X | X | X | X | Stuffed animals/ puppets | Used often as props for games or to dramatize stories/songs |

B-10 Drawing/Writing/ Song Work Sample

Drawing Steps:





A crab walked through the water.



Draw and label a crab.

Oh, A-Hunting
We will go
A-Hunting
we will go
We'll catch a crab
Put him in a cab
And then
We'll let him go



A crab walked
through the water.
A crab changed his
shells.

Appendix C - Interview Protocol

C-1 Classroom Teacher Interview Questions

Interview Protocol for Interview of Classroom Teacher

Audio-tape will be turned on after asking permission for audio-taping of interview.

1. Please tell me about the literacy program you use in your classroom?
 - Animated literacy
 - Guided reading
2. What are your thoughts about the use of music in your classroom?
3. Please share with me the literacy activities you feel your children enjoy the most.
4. What are some of the changes you have seen in kindergarten in the past few years, or changes you would like to see?
5. What opportunities for group or team planning do you have in preparation for your instruction?

Any additional questions?

C-2 Teacher Interview Transcript: 2/23/07

Please tell me about Animated Literacy?

We started – I think this is our fourth year- and **we kind of had heard** a lot of good things about it from people that were visiting us. So, we decided to **go visit some schools** that use that and people were just very complimentary about it, and then **we did go to the training**. Really, since it wasn't a very expensive program to buy into, **they agreed to let us go ahead and begin it**.

How long was the training?

It was **two days**. It was actually with the person that wrote the program, so **it was very good**. We do the every other day...in the first semester we introduce 2-3 letters a week. **Previously we had done a letter a week** and we thought “we don't know if they can handle this (she laughs)” but they honestly do. I think it has a lot of meaning for them **and it is so brain researched**.

...and then you continue with the reinforcement...

Right, definitely—

I think it's the gestures and the music **both, really**. I really do. I think it has **so many different aspects**.

Can you tell me about your use of music in the classroom?

Uh-huh...I guess that even at the very beginning of the year we **use so much**...we have **shape songs**...I just think **if you put it to a tune it really helps them remember it**. **The rhythm and rhyme that is involved is very good for them**. We just finished our Mother Goose Unit- you know some of those rhymes are very musical.

I feel it is important to note her use of “we”. It appears she views these decisions coming from the “team”. Not once did she refer to a choice of curriculum, or curriculum model- coming from the administration.
Teacher Leadership

They were willing to try something- even if they were afraid it wasn't going to work. They are risk-takers so children win! She had mentioned to me before about the brain research...I think that she feels that part of this program leads to its merit.

Thoughts of benefits:
Fluency
Phonics

We do about a month long unit. We have thought about doing it earlier in the year, but you know **sometimes they confuse rhyming words with beginning sounds, so we stress at the beginning of the year the beginning sounds.** Of course many of our big books do have rhyming words- so we bring it in whenever we have that...I'm just trying to think here...music.

Teacher
decision
making

Are you from a musical background?

I play the piano and the organ, which are probably stronger suits than my singing (she laughs)- but **I have that musical background.** I still play a couple of times a month at our church.

Before you were using Animated Literacy were you already using a lot of music in your classroom?

I did, but **not as much.** Actually we did a **letter of the week** program **that had a song with it- but it did not have the gestures.** So I **do** think that **the gestures component is very important.** I also have noticed that **the drawing has really helped** their fine motor skills as well. I guess that I am still really working on **my literacy centers** and trying to hold the kids a little more accountable for those- you know what I mean? (transcript continues)

She has mentioned to me now on more than one occasion that she is not happy with the accountability of her learning centers. A day later, she showed me that book that she spoke about and gave suggestions for improving learning centers.
**Gestures
Literacy Centers**

C-3 Music Educator Interview Questions

Interview Protocol for Interview of Music Educator

Audio-tape will be turned on after asking permission for audio-taping of interview.

1. Please tell me about your music program you use when working with your kindergarten students?
2. What are some of the activities your kindergarteners do that they seem to enjoy the most? Explore.
3. Please share with me your thoughts about connections you may see, if any, between learning to read text and music?
4. What opportunities for group or team planning do you have in preparation for your instruction?
5. Any additional questions?

C-4 Music Educator Interview Transcript: 2/27/07

Tell me about your use of books in your classroom?

Yes, I actually use books with the kindergarten a lot.

Sometimes they are **singing books**- (she gets up to get a few books off the shelf) One of the books I use, the Up, Up, Down book by Robert Munsch. I use it when **going up and down** with our voice. We **practice before we actually read the book**, and we start down here. (She reads up, up, up, up, up, up, down, demonstrating a **rise in pitch** with her voice and having her voice slide down when reading the word down). I **read it and once we get to these parts we talk about this**. And then yesterday- (she goes to retrieve another book off the shelf and it is difficult to catch every word she is saying as she leaves the tape recorder) we have been starting to **talk about lullabies**. I read this barnyard lullaby- and I was going to have the children **do the sound of the barnyard animals**. I was going to have them learn the lullaby to sing, but I just for time's sake- with 20 minutes- by the time you learn the song...anyway, **I just sang the lullaby, you know. I could demonstrate that I sang soft/ and loud. Then I noticed**

that today you re-visited the same thing- with the lullaby... Sometimes I use the books for **different musical concepts, and other times there are actually songs in it**. I have **several lists of books, for the music concepts,** books you can tie in and stuff. Next week, the principal is going to observe me on Wednesday, and I am planning on doing a book that I saw used...**Polar Bear, Polar Bear**

(♫*She begins to sing Polar bear, polar bear, what do you*

that today you re-visited the same thing- with the lullaby... Sometimes I use the books for **different musical concepts, and other times there are actually songs in it**.

I have **several lists of books, for the music concepts,** books you can tie in and stuff. Next week, the principal is going to observe me on Wednesday, and I am planning on doing a book that I saw used...**Polar Bear, Polar Bear**

(♫*She begins to sing Polar bear, polar bear, what do you*

Using books to model strategies good singers use...hmm, that sounds familiar.

**Comprehension
Vocabulary
Fluency**

Phonics

Phonemic

Awareness

genre

She approaches the text with a purpose for instruction in mind, as an effective classroom teacher would.

see...They sing and then I sing the next part and then we go to the next animal.

Tell me about how you come up with all these ideas for your use of books...is it from conferences you attend- from just loving books yourself—from your understanding of kindergarteners...

It appears that attending the conferences is expanding her practice.

I guess I probably do do a lot with it...but **sometimes** we don't do anything with it and **we just sing**. At the **beginning of the year** we just did **a lot of action songs**...like *The Wheels on the Bus*...but even though they might not see the words from the Farmer in the Dell, **they're still sequencing like they would in reading**. I do like books and I think it's really nice for the kids- **I could just sing them the song, or I could sing them an example of a lullaby and they could have pictures—that's what I like about books too...because not everybody is an aural learner**. So if I have a visual to go with the aural, and we do a motion that will help them retain whatever concept that we are teaching. That's why I use them.

It would appear that she uses books to help her meet the needs of all of her learners. She addresses learning styles- and music as a way to reach all children through her instruction.

I notice that you use a pointer that the children use to track print...

That is something new that the kindergartners are doing. We did some stuff earlier in the year with **pictures**...they would **have to hold up the picture that went with a certain verse**. It was a song about "What I Like About School" or something like that—and they would have to hold up the picture. We would **take turns**...they would have to go in order. So, we have done some of the same ideas- but we haven't used the pointers as much until this semester.

This is like the Find That Word strategy in vocabulary. It also develops **listening skills. Vocabulary**

C-5 Interview Questions for Children

Interview Protocol for Small Group Interviews of Children

Introduce myself again and ask the students their names. Audio-tape will be turned on after telling them that I am going to audiotape this so I can remember what we talked about.

1. What are some of your favorite things to do at school? (Allow for open discussion among children)
2. I know Mrs. Miller does some fun things in here to help you learn to read...what are some of your favorite things to do?
3. Tell me about what you learn in music?
4. Tell me about using music or songs in Mrs. Miller's class?
5. Tell me about other times you enjoy music...home? Car?

Favorite songs?

C-6 Children's Interview Transcript:

4/2/07

I want to talk with you about some of the songs that you do here...do you have any favorites?

The Freeze! (Jennifer)

Why do you like the Freeze?

Because you get to dance! You sing too and dance. It's fun! (Gabriella)

Dancing is fun! (Jennifer)

I like Listen and Learn (Gabriella). **It helps you learn to listen to the music.** You get in a circle and you...

Well...you hop when it says hop, and you skate when it says skate.

Oh, I think I saw you do that one day...when you went around the desks? Ellen- what are some of your favorites?

Listen and learn.

Why do you think you like that one SO much?

Because you get to move.

What are some things you think you could learn from music?

I learned that **dancing is fun**....I have a jazz class.
(Jennifer)

I like to do the flower dance (Gabriella) I like the square dancing (Ellen). I like the weed rap. (Jennifer).

Tell me about the instruments.

(Ellen) can't seem to come up with her thought.

The children appear to have very distinct opinions regarding music. Jennifer is driven by the movement.

The children like different songs.

They can voice a purpose for the music.

I find it interesting that their "likes" are so varied. It appears that their teachers have found "something for everyone"

You get to play instruments- and you get to hold them.

I'm going to play the trombone.

You are! Tell me about that...how do you know about a trombone?

Because it is so big she thinks she likes to play it (Carl)

It's a brass instrument. Have you ever watched a band?

Yeah, I did (Carl) Actually, I like the big one!

Maybe the baritone? The tuba?

The tuba, like it's *this* big, only higher (Carl)

Do you ever listen to music at your house?

I listen to it on my computer (Carl)

Oh, you listen to music on your computer...a lot of kids do that I hear. Like on IPODs.

I listen to music on my radio! (Jennifer). I listen to music **on my hunting game**...it has music on it. (Carl is referring to a video game).

And what did you like to hear on the radio?

Shakira.

Gabriella...tell me about what you said, that you listen to songs in the kitchen.

I have a radio and you can't watch it on TV. You got to put a song one in there And then you can listen to it and if you don't like that one you can just do like that (she acts like she pushes a button- perhaps to send the CD to a different track?)

Just as the other group had shared- these children listen to music in several authentic settings. Home, cars, through entertainment. However- I would venture to guess that the movement they love so much is absent in much of this out of school music activity. Perhaps it is critical that we give them this opportunity to "move" to the music.

I think she is talking about the difference between a CD and DVD.

Appendix D - IRB Documents

D-1 IRB Approval Form



University Research
Compliance Office
203 Fairchild Hall
Lower Mezzanine
Manhattan, KS 66506-1103
785-532-3224
Fax: 785-532-3278
<http://www.ksu.edu/research/comply>

Proposal Number: 4182

TO: Marjorie Hancock
Elementary Education
246 Bluemont Hall

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: February 15, 2007

RE: Approval of Proposal Entitled, "The Role of Music in Early Literacy Learning: A Kindergarten Case Study."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. **This proposal is approved until February 15, 2010.**

In giving its approval, the Committee has determined that:

- There is no more than minimal risk to the subjects.
 There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file. Any change affecting human subjects must be approved by the Committee prior to implementation. All approved proposals are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by a member of the University Research Compliance Office staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if appropriate and if the subjects are KSU students, to the Director of the Student Health Center.

When deemed appropriate by the IRB and prior to involving human subjects, properly executed informed consent must be obtained from each subject or from an authorized representative, and documentation of informed consent must be kept on file for at least three years after the project ends. Each subject must be furnished with a copy of the informed consent document for his or her personal records. The identification of particular human subjects in any publication is an invasion of privacy and requires a separately executed informed consent.

It is important that your human subjects project is consistent with submissions to funding/contract entities. It is your responsibility to initiate notification procedures to any funding/contract entity of any changes in your project that affects the use of human subjects.

D-2 Teacher Informed Consent

PROJECT TITLE: The Role of Music in Early Literacy Learning: A Case Study

PRINCIPAL INVESTIGATOR: Dr. Marjorie Hancock

CO-INVESTIGATOR(S): Laurie J. Curtis, 214 Bluemont Hall, [ljcurtis@ksu.edu](mailto:lcurtis@ksu.edu)

CONTACT NAME AND PHONE FOR ANY PROBLEMS/QUESTIONS:

Dr. Marjorie Hancock
246 Bluemont Hall, 785-532-7304, mrhancock@ksu.edu

IRB Chair Contact/Phone Information: Rick Scheidt: 785-532-3224

PURPOSE OF THE RESEARCH: To observe ways teachers use music in a kindergarten classroom to engage children in literacy learning.

PROCEDURES OR METHODS TO BE USED: Researcher will be observing in the kindergarten classroom and music education classroom during the instructional day. Fieldnotes will be recorded. Occasionally video-taping of group activities will be done in order to document student participation and engagement. Brief teacher interviews will be audiotaped in order to assure accurate recording of teacher comments. Children will be asked questions regarding music activities that they enjoy and learn from. Observations and interviews will occur at times mutually agreed upon by the teachers and researcher.

LENGTH OF STUDY: Spring 2007: February 15, 2007 – April 23, 2007

There are no anticipated risks from this study. No intervention is to be implemented. This case study is observational in nature and researcher will be an observer, not a participant.

TERMS OF PARTICIPATION: I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Name of Participant: Teacher XYZ

Signature of Participant:

Date: _____

D-3 Parent Information Letter

Dear Parent,

I am writing to ask your permission to allow your child, _____, to participate in a research project titled, “The Role of Music in Early Literacy Learning: A Case Study.” The purpose of this project is to explore the way music is used in kindergarten classrooms to engage children in learning to read, write, listen, and speak.

This study will allow me to observe children during their kindergarten day, both in their kindergarten classroom and their music classroom to see what types of experiences they participate in that connect music with literacy. Over a period of several weeks (February 16, 2007 – April 16, 2007), I will observe how Mrs. Miller and Ms. Lyons use music to engage them in their learning. I will take notes and occasionally video tape the activities to accurately record group activities. I may also ask the students their ideas about music and ways music may help them learn or remember things.

Your child’s school has been selected due to its excellent literacy instruction and the support of experienced teachers and administration. This project is at no cost to your or your family. No part of this report or videotapes will be published, presented, or placed on the Internet without your expressed written consent. If in the future a journal publication or conference presentation is given over what is learned from this study, your child’s name and the location of this study will not be revealed.

In order for this study to begin, I am asking that you sign the attached Parental Informed Consent letter and return it to me in the enclosed envelope. You may drop it in the mail or return it to school with your child. If you have any questions at any time during this project, please do not hesitate to call me at my office (532-6158) or at my cell (817-564-3472) or e-mail me at ljcurtis@ksu.edu. You may also contact Dr. Marjorie Hancock at 532-5917 or at mrhanc@ksu.edu. Additionally, if you have further questions about your child’s participation in this project, you may contact Dr. Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 1 Fairchild Hall, Kansas State University, Manhattan, KS 55606, 785-532-3224.

Thank you so much for allowing your child to participate in this study. I look forward to spending time in his/her classroom!

Sincerely,

Laurie J. Curtis, Instructor
College of Education
Kansas State University
214 Bluemont Hall
1100 Mid-Campus Drive
Manhattan, KS 66506

D-4 Parent Informed Consent

I have read the foregoing letter from Laurie Curtis and understand the project **The Role of Music in Early Literacy Learning: A Kindergarten Case Study** in which she will be exploring the use of music in the kindergarten classroom, especially as it pertains to literacy instruction.

I voluntarily agree to allow my child, _____, to participate in this study. It is my understanding that the purpose of the project is to describe the use of music in the kindergarten classroom as it related to early literacy learning. This study will be conducted during the normal school day. I understand that my child may be asked about music or songs he/she enjoy yet his/her name will **not** be used in any report of this study. I also understand that some class sessions may be videotaped in order for activities to be accurately documented. All videotapes will remain the property of Laurie Curtis and will not be published, presented, or downloaded to the Internet without my additional written consent. If I have any questions or concerns, I may contact Laurie Curtis at her office (785-532-6158) or at her cell phone (816-564-3472) or e-mail her at ljcurtis@ksu.edu. I may also contact Dr. Marjorie Hancock at her office (785-532-5917) or by e-mail at mrhanc@ksu.edu. Furthermore, I may contact Dr. Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 1 Fairchild Hall, KSU, Manhattan, KS 66506 (785-532-3224).

Signature of Parent

Date

PLEASE RETURN THIS FORM IN THE STAMPED ENVELOPE PROVIDED