A Case Study on How The Use of Music Affects The Academic Progress of Preschool Children at an EC-Fifth Grade Campus Located in Northwestern Louisiana

by

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**Chapter One**

**Introduction**

Mrs. Fisher stands by the entrance to the classroom as the students file in one by one. The students stop at the door and pull their name cards before they walk in. They stand quietly and wait to show the teacher aide their name card. Each student must use the card to spell their first and last name as they touch each letter. After the students spell their names and place all their belongings in the appropriate places, they wash their hands and make their way to the carpet. The female lead teacher walks in after the last student and assists students as needed. After all students have been helped, she stands at the front of the room until all students are settled on the carpet. Students quietly socialize and chatter among themselves as they come to their assigned squares on the carpet. As the last student is walking towards the carpet, Mrs. Fisher begins a rhyme that all students join in and sing. As the rhyme is said, the students begin to adjust their bodies and focus their attention to Mrs. Fisher. Mrs. Fisher informs them that it is time for music and movement. She presses play on the CD player. Music blares from the speakers and all students start to move around the carpet to the rock-and-roll beat. They seem very familiar with the song that Mrs. Fisher has selected, and they recite each word on beat. The students dance and intermingle with each other as they move around the carpet.

The music consists of a man and woman singing lead, and the song asks the students to name the opposite of each word they recite. The students are able to recall the requested information immediately. The song ends and the students sit down to the rhythm of their teacher’s counting from ten to one. The teacher announces that it is Calendar time, turns to the classroom calendar and asks students if they know which day of the week it is. Hands go up and the teacher calls on a student, who gives the correct answer. Then the teacher asks students to review all of the days of the week to a familiar tune. They repeat the strategy for the months of the year. The teacher informs the class that last month was July and asks what the current month is. They sing the months of the year in unison and determine that the month is August. The teacher continues with the large group. To end Calendar time, she plays a song and allows students to dance freely as they are assigned to their small groups.

The teachers spilt the students into small groups and begin presenting their lesson for the day. The teacher with group 1 states her objective, holding up a book with an upper and lowercase /Ss/ on it. She opens the book and begins to read it, pacing herself to the tune of “Jingle Bells.” The students quickly catch the beat and are able to rhyme and identify words that start with the letter /S/ sound using the known rhythm and pictures in the book. After the book is introduced and read, the teacher performs a picture walk. She asks the students to identify words that start with the /S/ sound and helps the students identify the words. She ends the lesson by again singing the /S/ song. The students seem very familiar with the song and sing as loudly as the teacher does. When the small group is dismissed, the students line up to use the restroom. Those who have left Group 1 hum and sing the words from the song about the letter /S/. As they talk among themselves, they identify and recall words that start with the letter of the week.

After some reflection on how I convey new and vital information to my students, I realize that although I have never had any formal training on how to speak or teach Spanish, but my students can name the parts of the body in both English and Spanish. At this point, it becomes clear to me that my students are not just singing a song. They are learning and transferring the information to real life situations. From this observation, the present study evolved. It focuses on music as an important and vital tool in relaying and retaining information during instruction to learning minds.

**Theoretical Model**

There is theoretical support for the use in the classroom. In this section we will discuss two theories which are most directly related to music and learning. These theories come from the fields of linguistics and psychology respectively.

One linguistic theoretical orientation, “nativism,” explains language in purely biological terms. According to this perspective, human beings are biologically pre-wired to process and therefore acquire content. Noam Chomsky (1965), most widely known nativist, claims that a learner’s input from the environment is insufficient to account for the speed with which individuals acquire new material. Instead, he posits that humans are born with knowledge which predisposes them to acquire new material. This knowledge is what allows learners to structure any language and acquire it. Following in the nativist tradition is the work of Stephen Krashen (1982). Of Krashen’s five hypotheses, the best known and frequently referred to are the “Input” and “Affective filter “hypotheses. According to Krashen’s Input Hypothesis, new, unfamiliar vocabulary is acquired when its significance is made clear to the learner. Meaning is conveyed by providing extra linguistic support such as illustrations, actions, photos, and regalia. This in turn results in what Krashen refers to as comprehensible input, since the linguistic input is made comprehensible to the learner. Krashen further claims that the amount of comprehensible input is proportionate to the amount of vocabulary acquired. Thus, according to Krashen (1989), vocabulary is incidentally acquired through stories because (1) familiar vocabulary and syntax contained in the stories provide meaning to less familiar vocabulary, and (2) picture illustrations clarify the meaning of unfamiliar words. There is evidence that picture illustrations succeed at supporting the reading process by clarifying the meaning of incoming verbal information (Hudson 1982; Omaggio, 1979; Mueller, 1980; Bradsford and Johnson, 1972). In short, meaning is critical to the acquisition of second language vocabulary.

When learners hear story songs that is, stories which have been set to music it is possible to similarly acquire vocabulary. As in the case of orally-read stories, story songs which are presented with picture illustrations, photos or gestures provide the necessary extra linguistic support which results in language acquisition. Furthermore, because of the positive effects which music has upon learners, story songs may motivate and captivate the students’ attention in ways that oral stories cannot. Krashen’s second hypothesis (1982), the “Affective Filter hypothesis,” is also tied to music use in the classroom. According to this hypothesis, the extent to which linguistic input is received from the environment depends largely upon the learner’s “affect,” that is his inner feelings and attitude. Negative emotions, functioning much like a filter, can prevent the learner from making total use of the linguistic input from his environment. Therefore, if he is anxious, unmotivated, or simply lacks confidence, the acquisition of new material may be limited It is therefore, in the interest of the teacher to provide an environment which evokes positive emotions. Music does precisely that. Whether learners simply listen to instrumental music, vocals in the target language, or sing in unison, it is a pleasurable experience. Furthermore, as reported in the literature, singing songs in unison produces a sense of community and increases student confidence in the second language. Thus, music, however it is used in the classroom, evokes positive emotions which can lower the “affective filter” and bring about language acquisition.

**Purpose of this Study**

Equivalent to natural language abilities, most children are born with natural music ability which varies individually. During this study, I hope to prove that the use of music during the introduction of a new concept helps to speed up the learning process, improve retention and recall. This study has been developed in hopes to help other teachers teach their students in an easy and entertaining manner. Teachers will be able to apply less effort when introducing and teaching material. They also will be able to quickly identify and assist struggling learners.

**Research Question**

How does the use of music affect the academic progress of preschool children at an EC-Fifth grade campus located in urban northwestern Louisiana?

**Definitions**

Case Study

A case study is a collection and presentation of detailed information about a particular participant or small group, frequently including the accounts of subjects themselves. A form of qualitative descriptive research, the case study looks intensely at an individual or small participant pool, drawing conclusions only about that participant or group and only in that specific context.

Constructivist Learning Theory:

Constructivism learning theory is a philosophy which enhances students' logical and conceptual growth. The underlying concept within the constructivism learning theory is the role which experiences-or connections with the adjoining atmosphere-play in student education. The constructivism learning theory argues that people produce knowledge and form meaning on the basis their experiences.

Teacher Researcher:

Action research involves utilizing a systematic cyclical method of planning, taking action, observing, evaluating (including self-evaluation) and critical reflection prior to planning the next cycle (McNiff, 2002; O'Brien, 2001). At its core, action research is a way to increase understanding of how change in one's actions or practices can mutually benefit a community of practitioners (McNiff, 2002; Reason & Bradburym, 2001; Carr & Kemmis 1986; Masters, 1995).

Theoretical Model:

The theoretical framework is a basis for the boundaries of a study. Once themes are established, researchers can look for answers to the relevant questions they have developed on broad subjects. With a framework, they can resist getting off tract and stay focused on their desired topic.

Mixed Method Research Design:

This is a research design in which the inquirer or investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches and methods in a single study or a program of study.

**Justification for this Study**

This study is important to the teaching profession because it will help teachers make efficient use of time and learning materials. This will reduce the time of instruction and the process of reviewing material. Students will be able to grasp and recall concepts without having to participate in activities such as strenuous drills. It will also reduce the time students need to study. According to a study published in the journal *Psychology of Music*, children exposed to musical education also have enhanced reading skills compared to those without such exposure. With this said, this study was conducted in hopes of proving the positive effect music has on the education process.

**Limitations**

This study is characterized by of three limitations: time, size, and personal bias. The first limitation is the amount of time allotted for this study. I will observe subjects under study for an hour two times a week over an eight month period. The study will begin shortly after the fall session begins and the study will end before the spring semester is concludes. Both Pre-Kindergarten teachers have to adjust their daily routine because of last-minute schedule changes. As a result of the changes, instruction is often lost and cannot be made up. Instruction time can also be lost if student transition time is interrupted and does not flow smoothly. Small groups can also be affected if a teacher is absent because a substitute teacher is not always available. There is also a possibility that the results from this study would be different if more observation time were permitted.

Second, this study is based upon one classroom located on the same campus. Most students are blood relatives and/or well acquainted with one another because they attend a neighborhood school. The results from this study may have been different if observations of students from classrooms with various demographic and economic backgrounds were available.

My final limitation is my personal bias. I have a personal belief that music has a positive effect on how information is relayed to and retained by young children. I have used both methods and believe that more information is retained when the use of melodies is involved. In my classroom, this is the method that I use when applicable because my students seem to grasp the concept more quickly. I have also observed that the students will make up their own songs when trying to retain information.

**Chapter 2**

**Literature Review**

**Introduction**

The concept of understanding the correlation of music as a useful instruction tool and in order to supply background and insight into the research question of this study, this chapter reviews the literature of two specific areas. The first area of review will focus on music as an effective tool of instruction, and the second area will focus on the positive correlation of how music assists the learner in increasing retention of material through the use of familiar tunes and melodies.

**Music as an Effective Tool of Instruction**

As stated by Fishoff and Michener (2012), music is an essential aspect of curricula being cut from many of our schools because of the economic downturn and the push for accountability. Science and social **studies** are being largely ignored at the early education level, and other subjects such as **music** and art are being cut altogether. Is the cost effectiveness of cutting subject areas from the curriculum as straightforward as it appears? This article examined the issue by looking at the research on just one curricular victim of our current crisis: **Music** education with respect to children's reading skills and acquisition of language, and its overall benefits for at-risk students. Researchers find that students who have music seem to have a greater capacity to process all sounds, including speech (Aleman, Nieuwenstein, Bocker & de Hann, 2003). A two-year 1993 Swiss study of 1,200 children in 50 schools discovered that students involved in the music program were better at languages, learned to read more easily, and had a lower stress level than non-music students (Weber et al., 1993as cited in Phillips, 2009). In fact, one researcher at University of California, Irvine believes that music and language are linked in the brain from the earliest stages of infancy as the infant processes sounds of voices around him or her (Garifias, 1990). Music teachers train students to listen precisely, contributing significantly to their abilities for language acquisition and communication in school (Madaule, 1998). Since music influences the right side of the brain that involves emotion, it facilitates concentration and relaxation, eliminating the stress that may be associated with second language learning, or affective filter interference (Krashen, 1985). Music teachers often help regular teachers connect music across the curriculum and across grade level standards with extensions to support learners.

Research conducted and complied by Douglas, S. and P. Willatts (1994) has shown that a relationship exists between phonological awareness and literary skills. It has been suggested that a structured program of musical activities can be used to help children develop a multi-sensory awareness and response to sounds. The relationship between musical ability and literacy skills was examined in a study that showed an association between rhythmic ability and reading. A further pilot intervention study showed that training in musical skills is a valuable additional strategy for assisting children with reading difficulties.

In a similar study and article compiled by Shilling (2002), the connections among mathematics, music, and movement in early childhood curriculum are discussed. The author presented music activities in which mathematical concepts were embedded; focuses on activities providing experiences with time-based relationships and rhythmic patterns. Shilling also asserted that integrating movement and mathematics into music activities provides a way for young children to develop logical/mathematical and musical/rhythmic intelligences. The study also included a list of resources for teachers.

Lalas and Lee (2002) go in depth and discuss howmusic is frequently used by teachers to help students acquire new material. This observation is not surprising, since the literature abounds with the positive statements regarding the efficacy of music as a vehicle for first and second language acquisition. It has been reported to help second language learners acquire vocabulary and grammar, improve spelling and develop the linguistic skills of reading, writing, speaking and listening (McCarthey,1985, Jalongo and Bromley, 1984, Martin, 1983, Mitchell, 1983, Jolly, 1975). According to educators, music is advantageous for still other reasons. First, for most students, singing songs and listening to music are enjoyable experiences. The experience is so pleasurable that it is not uncommon for students to pester their teacher so that they may sing again and again. Also, as students repeatedly sing songs, their confidence level rises. Furthermore, by engaging in a pleasurable experience, learners are relaxed and their inhibitions about new material are lessened. Yet, while they are more relaxed, they are also more attentive than usual, and therefore, more receptive to learning. Through songs, students are exposed to authentic examples of the content. Moreover, target vocabulary, grammar, routines and patterns are modeled in context. These are but a few of the benefits associated with instructing using music.

Another study conducted by Gillespie and Glider (2010) investigated how and when teachers used **music** in **preschool** classrooms throughout the day. Direct classroom observations were conducted to determine **preschool** teachers' use of **music i**n four Head Start classrooms and one private **preschool** classroom for a total of 24 hours of observation in each classroom. **Music** was observed to be used 6.5 times per hour on average. All teachers used **music** most frequently to scaffold children's learning both in academic skill and social skill areas, and second most frequently to scaffold routine activities such as cleaning up and transitions to new activities. All teachers used **music** most frequently during group time. **Music** was used most frequently at group times outside times specifically set aside for **music** and movement. Researchers, practitioners, parents and teacher preparation professionals need to be aware of these findings in order to fully appreciate the broad experience that teachers and children have with **music** on a daily basis in **preschool.**

**Correlation of How Music Effects Learning**

The second area of this review will focus primarily on the retention of material. In 2002 Lake conducted a study that talked about how the human brain is extremely complex. Individual differences are as varied as humans ' visible features. There are general conclusions about the functions of the left and right brain, however, that can be used to help relate music to the language student. James Asher (1993) has based his Total Physical Response method on what he calls “brain switching.” He says, “My hypothesis is that no genuine learning can happen until there is a brain switch from the left to the right (Asher 1993). ”There must be an image attached to the mental representation of a word in order to retain and use it. Asher presents a strong case with the following bit of research data. “Many language instructions have an illusion that left brain learning strategies are effective. Examples are pronunciation exercises, dialog memorization, pattern drills, and grammar explanations. Only four percent of those who attempt a second language with a left brain (Behaviorist Approach) continue to fluency” (Asher 1993). Even if the figure were multiplied by five, the results of the research are startling. In terms of cultural diversity and learning styles, it is clear that some cultures are more right-brain dominant than Americans are. Some ethnic groups think more in picture than in words. English as a Second Language students represent that diversity.

According to Brown (1994, p. 54), some of the features of right-brain dominant personalities are preferences for drawing freedom in expressing emotions, and frequent use of metaphors. Right-brain dominant people respond well to illustrated or symbolic instructions and rely on images in thinking and remembering. Brown (1994) describes the left-brain dominant individual as verbally oriented and objective. They rely on language in thinking and remembering and tend to be analytical in their reading. The left-brain learner rarely uses metaphor. Lake (2002) ended his study by concluding that music with words uses both brain hemispheres. Emotion and language are one in a song. When coupled with visual images, music becomes a very powerful learning tool. Perhaps this is why a television program that dramatizes contemporary songs has been as successful as a medium for the youth culture. Whether it is a positive or a negative message the input sticks.

Schellenburg presented a study about the idea that music makes an individual smarter. The study has received considerable attention from scholars and the media. The present report is the first to test this hypothesis directly with random assignment of a large sample of children (N = 144) to two different types of music lessons (keyboard and voice) or to control groups that received drama lessons or no lessons. IQ was measured before and after the lessons. Compared with children in the control groups, children in the music groups exhibited greater increases in full-scale IQ. The effect was relatively small, but it generalized across IQ subtests, index scores, and a standardized measure of academic achievement. Unexpectedly, children in the drama group exhibited substantial pre- to post-test improvements in adaptive social behavior that were not evident in the music groups. This information suggested the use of music improves the retention of material when used as a form of teaching.

In 2002 Anvari, Trainor, Woodside, and Levy compiled an article that examined the relations among phonological awareness, music perception skills, and early reading skills in a population of 100 4- and 5-year-old children. Music skills were found to correlate significantly with both phonological awareness and reading development. Regression analyses indicated that music perception skills contributed unique variance in predicting reading ability, even when variance due to phonological awareness and other cognitive abilities (math, digit span, and vocabulary) had been accounted for. Thus, music perception appears to tap auditory mechanisms related to reading that only partially overlap with those related to phonological awareness, suggesting that both linguistic and nonlinguistic general auditory mechanisms are involved in reading.

Lelas and Lee (2002) compiled a vast amount of research that suggested that to a great extent, much of the support for the use of music as an instruction tool comes from the area of psychology. The psychological literature is rich with research on music and rote memorization. Language acquisition and rote memorization represent two distinct types of verbal learning. Yet, although they are not synonymous, they are related. Language acquisition subsumes memorization. The ability to memorize is critical to the language acquisition process, since it would be virtually impossible to acquire language without memory. Music reportedly enhances rote memorization. In fact, some studies point to the bond which exists between music and verbal learning (Crowder, Repp, Serafina, 1984; Borchgrevink, 1982; Palermo, 1978; Deutch, 1972). Music and its subcomponent, rhythm, have been shown to benefit the rote memorization process. When various types of verbal information (e.g., multiplication tables, spelling lists) were presented simultaneously with music, memorization was enhanced (Gfeller, 1983;Schuster and Mouzon, 1982). Research which focused only on the effectiveness of rhythm, a subcomponent of music, has been equally favorable (Milman, 1974; Shepard and Ascher, 1972; Weener, 1971; Ryan, 1969; Staples, 1968). The psychology literature also indicates that the retentive effects of rhythm can be maximized when the targeted verbal information carries meaning. In several studies, a rhythmic presentation benefited memorization when the items were both meaningful and meaningless (i.e., nonsense syllables). Yet, the impact of rhythm was greatest when the verbal information to be memorized was more meaningful (Weener, 1971; Shepard and Ascher, 1971; Glazner, 1976). The psychological literature offers evidence of the positive relationship between music and rote memorization, a related yet distinct type of verbal learning.

Aleman, Nieuwenstein, Bocker, de Haan (2000), worked together on a euro-imaging study that suggested the auditory cortex is involved in music processing as well as in auditory imagery. They discussed and hypothesized that music training may be associated with improved auditory imagery ability. In their study, performance of musically trained and musically naive subjects was compared on (1) a musical mental imagery task (in which subjects had to mentally compare pitches of notes corresponding to lyrics taken from familiar songs), (2) a non-musical auditory imagery task (in which subjects had to mentally compare the acoustic characteristics of everyday sounds), and (3) a comparable measure of visual imagery (in which subjects had to mentally compare visual forms of objects). The end results were that the musically trained group did not only perform better on the musical imagery task but also outperformed musically naive subjects on the non-musical auditory imagery task. In hind sight, the two groups did not differ on the visual imagery task (Aleman, Nieuwenstein, Bocker, & de Haan 2000).

**Conclusion**

A child's initial introduction to patterned text often first occurs in songs, chants, and rhymes that are repeated over and over again throughout childhood. Once children become familiar with this patterning, they are excited and able to participate in shared reading, writing and other oral language experiences. Concepts about print become more meaningful, and conventions of print are learned in context. Additionally, substitutions in songs, chants or poems can provide for real language experience opportunities. Educators should feel confident using music to facilitate the acquisition of letter recognition and phonemic awareness. Clearly, there are numerous benefits associated with it. Furthermore, is supported by linguistic and psychological theory and research.

**Chapter 3**

**Methodology**

**Setting**

The setting for this study is centered upon one preschool classroom located on a campus that houses pre-kindergarten through fifth grade students in semi-urban Northwest Louisiana. The enrollment was approximately 542 students with 44 staff. The student body is approximately 52.7% male and 47.3% female and 96% African American, 3% Caucasian, .5% Hispanic and .5 % Asian American. There are two pre-kindergarten classrooms with 20 students in each class. Both classrooms have a 10:1 student-teacher ratio with 10 boys and 10 girls in each class. There is a certified teacher and a licensed paraprofessional in each classroom.

The classrooms are both decorated and sectioned the same. The rooms are set up with 10 basic centers in order to comply with the pre-kindergarten guidelines set by the state of Louisiana. The centers are labeled: Quiet, Sand, Water, Computer, Blocks, Drama, Art, Music, Science, Table Games, Library and Gross Motor (located next to classroom). When students walk in the door, they are at the front of the classroom. The quiet center and the library are to their immediate left. The quiet center has a carpet and a bean bag and is filled with activities designed for one person. The library center has a book shelf and a mat the students can sit on and read a book or work with a story board. The computer center is next to the library. It consists of a child-size table with two computers, equipped with software and headphones. The focal point of the classroom is the large carpet next to the computer center. This is where large and small groups are held. This carpet is also where the block center is located. The carpet is brightly colored with primary colors with 20 squares sectioned off by purple lines. In front of the carpet hangs a mounted Smart Board. To the right of the Smart Board is the classroom calendar and weather graph. Along the right side of the carpet runs a bookshelf that is filled with books and the teachers’ teaching materials. Positioned at the back of the carpet are two shelves filled with various blocks.

On the other side of the carpet is the music center, students can go to this center and listen to music as well as play musical instruments. The music center separates blocks from the drama center. The drama center is where the classroom theme is located. The themes change as the themes in the curriculum change throughout the year. The current theme is the farm because it is the beginning of the year and the curriculum is focusing on Fall Harvest. The center is filled with items you might find on the farm. The center has a child size refrigerator, stove, cabinets, doll bed, Chest of drawers and table with two chairs. The science center is the last center on the far right corner of the room. It is filled with toys and games designed to help young learners discover the world around them. It also contains a table that seats four. Along the back wall of the classroom are 20 cubbies where each student has a designated area for their personal belongings such as backpack, jacket, mat, a small blanket and a change of clothes. Above the cubbies exists a row of eight cabinets that cover the entire back wall. The cabinets contain the teacher’s teaching materials and classroom supplies. The cabinets are decorated with the students art work. At the end of the cubbies and cabinets is a door which opens to the classroom bathroom.

In front of the right side of the cubbies is the water table. Students use this center to explore and conduct experiments with water. In front of the water table are two child-size tables. One table seats six, and the other seats four. This is the art center. It is also where small groups are held. In this center students have access to a multitude of art materials. The students can paint, use markers and crayons, and play-dough, or create three-dimensional art work. There is an art easel, a shelf containing art and collage materials, and a mailbox for each child’s work in this center. This furniture separates the art and the table game center. The table game center contains games and toys that will increase student’s math and fine motor skills. This center has a carpet, two shelves with an assortment of items the children may use at their leisure, and a table that seats four students. On the back of the two shelves rests a sand table. Students use the sand table to explore the different uses and forms that sand possesses. Looking around the classroom, one can tell that this is an environment where learning is promoted and each student’s individual growth is evident. Various forms of art generated by the students are displayed both at the students’ eye level and along the walls and windows of the classroom.

**Research Design**

This study was conducted using the case study research design. A case study is a qualitative research approach in which researchers focus on a unit of study known as a bounded system. In this study, the two variables that will be compared are the increase of student retention of material using music versus the retention of material without music during instruction (Gay, and Mills, & Airasian, 2009). Case study research is used when the researcher wants to answer a descriptive or explanatory question. This design is also effective when the researcher wants to study the implementation of a program. As the current study was conducted, the researcher intended to answer the question, “Is music a useful tool to aid in retention of materials?” If the findings of this study provide a positive response to the question, this result could lead to the implementation of new curricula that will speed up the learning process while lessening the load on the teacher. This design is appropriate for this study because it allows the researcher to compare and contrast the student retention when music is used as a teaching tool and when it is not used.

**Sample**

Purposeful sampling was used for this study. The participants were not designated by chance and were not selected randomly. This case study was selected because it is unique and generalizations cannot be concluded. Every aspect of this case study was chosen on purpose in order to construct a case study on the effect of student retention of material when music is used during instruction.

**Participants**

This study consists of four participants. The first participant is the class of study. Only one pre-kindergarten class was included in this study. There are 20 students, 10 boys and 10 girls, of whom nineteen are African American and one is Caucasian. All students have been in this classroom the entire year. In order to protect their privacy, I will use pseudonyms when referring to students.

The second participant is the classroom teacher. She is in her late twenties, is married, and has a toddler at home. She has been teaching for three years, and all three years have been at this school. She loves her family and her students. She is very caring towards the children makes extra effort to try to keep her students and their parents happy. She takes it upon herself to provide struggling learners with the assistance they need to succeed. She is kind and sometimes too lenient when it comes to classroom management. To protect her privacy I will refer to her as Mrs. Fisher.

The third participant in this study is the paraprofessional. She is in her late thirties, is married, and has two teenage children. She has been a teacher assistant for nine years and all nine years have been at this school. This is her first year working in a pre-kindergarten classroom. She has worked eight years as an interventionist teacher assistant. She loves her family and thoroughly enjoys working with pre-kindergarten children. It is beneficial to have her in the classroom because she has worked closely with kindergarten and is very knowledgeable about what the students need to know when they transition to the next grade. To protect her privacy I will refer to her as Mrs. Lee.

I am the fourth participant. I am finishing my coursework to obtain my Masters degree in Curriculum and Instruction. I plan to have my degree conferred in June of 2012. I have taught for pre-kindergarten boys and girls for eight years, four years in Texas and four years in Louisiana. After graduation, I plan to remain in the classroom and continue to work on perfecting my teaching skills. I want to show other teachers that the use of music during instruction should not be viewed as time filler. It can be a useful tool that will be helpful to all those involved.

**Instrumentation**

**Observations** During this case study, 16 observations were made over an eight month period. They were recorded during the time of the small group observation. I noted date, time, student’s behavior, and use or non-use interactions.

**Reflections** I wrote a reflection after each observation in order to gather my thoughts and document any information which was not written down during the observation. Those reflections are composed of my person opinions and thoughts but will help illustrate the premise of this case study.

**Interviews** I interviewed both the classroom teacher and the teacher assistant to gather their thoughts on the effectiveness of music as an instructional tool used to introduce and review concepts. Those interviewed provided insight and valuable data which could not be accessed any other way.

**Teacher Assessments** I used the teacher’s assessments to monitor the students’ letter recognition and sound recognition growth. The teacher administered an assessment after each letter was introduced. Music is used when introducing alternating alphabet letters; therefore, the assessment provided insight into the students’ retention of each letter.

**Procedural Details**

I conducted direct classroom observations to determine the frequency of music use by the preschool teachers throughout the preschool day to assist in instruction. I also used an event sampling procedure in the direct classroom observations. When a teacher used music, I noted the current classroom activity, categorized the type of music used and described the teacher’s use of music in a brief narrative on the observation form by means of a laptop computer during each classroom observation (Table 1). Further, I categorized each music use episode according to the system listed in Table 2. This music categorization schema was developed based on field notes from a qualitative study of young children’s music preferences in which Roulston (2006) used a typology modeled after Goetz’s (1976) typology of student behaviors, based on classroom observations. Roulston’s original schema remains intact. As needed, I added subcategories when we observed a use of music that was not addressed by the original typology. I did not add any subcategories for uses of music that were not observed. In coding each episode of music use, I assigned as many codes as were appropriate. Many episodes received two codes (for instance, sitting in a circle and body parts) and some received three codes.

**Table 1. Part of a sample observation form.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Teacher | Date | Classroom Activity | Music Category | Narrative Description |
| 3 | 10/17 | Small Group | 1.2.6  1.3 | Teacher sings to the child who is taking a long time to check the weather (in tune to Frere Jacque) ‘Is it sunny? Is it sunny? |
| 4 | 12/09 | Small Group | 1.2.4.3  1.4 | Teacher shows children how to behave. She sings  her instructions as she demonstrates |

**Table 2. Music categorization system.**

Song functions in early childhood music activities

1. **Pedagogical** (musical activities are used for pedagogical purposes)

1.1 Musical concepts (music is used to explore vocal qualities and musical concepts)

1.1.1 Beat

1.1.2 Rhythm

1.1.3 Volume

1.1.4 Pitch

1.1.5 Timbre

1.2 **Concepts** (music is used to teach a concept or content knowledge about the world)

1.2.1 **Colors**

1.2.2 **Numbers/*Counting***

1.2.2.1 ***Comparisons e.g. quantity, size***

1.2.2.2 ***Shapes***

1.2.3 **Animals (farm, zoo, etc.)**

1.2.4 **Social/emotional skills**

1.2.4.1 ***Children’s names***

1.2.4.2 ***Behavioral reinforcement***

1.2.4.3 ***Behavioral instruction***

1.2.5 **Calendar**

1.2.5.1 **Months of the year**

1.2.5.2 **Seasons**

1.2.5.3 ***Days of the week***

1.2.6 ***Weather***

1.2.7 ***Letters***

1.2.7.1 ***Handwriting***

1.2.8 ***Plants***

1.2.9 ***Food/nutrition***

1.3 ***Scaffolding one child (in group context)***

1.4 ***Scaffolding for whole class***

**Table 2. (Continued).**

2. **Actions** (Music is used as accompaniment to actions)

2.1 **Body parts**

2.2 **Different kinds of movement (e.g. hopping, jumping)**

2.3 ***Brushing teeth***

2.4 ***Hand washing***

2.5 ***Lotion/sanitizer***

3. **Cultural knowledge** (Music is used to pass on knowledge about one’s country and

culture)

3.1 **Holidays**

3.2 Patriotic songs

3.3 **Traditional children’s songs**

3.4 Ethnic maintenance (Music is used to maintain a connection with another culture, in

terms of musical style and/or language)

3.4.1 Chinese

3.4.2 South American

3.4.2.1 Tango

3.4.3 Marengo

3.5 ***Language other than English***

3.5.1 ***Spanish***

**4. Routine songs** (Music is used to accompany a ritual event)

4.1 **Cleaning up**

4.1.1 ***Tables***

4.1.2 ***Centers***

4.1.3 **Outside/gym**

4.2 **Transition to new activity**

4.2.1 **While in line**

4.2.2 ***Before brushing teeth***

4.2.3 ***Attention signal/song***

4.2.4 ***Releasing students***

4.3 **Sitting (in circle *or at table*)**

4.4 **Greeting songs**

4.5 ***Closing songs***

5. **Language mastery**

5.1 **Rhymes and chants**

5.2 **Memory songs** (e.g. Old Women Who Swallowed the Fly)

6. **Play** (Music is used for entertainment, enjoyment and fun)

6.1 **Playing instruments**

6.2 **Singing**

6.3 **Dancing**

6.4 **Musical games (e.g. Musical chairs)**

7. **Background listening** (Music is used as ‘wallpaper’)

7.1 ***During centers***

7.1.1 ***CDs***

7.1.2 *Teacher initiated*

7.2 ***Group time***

**Table 2. (Continued).**

7.2.1 *CDs*

7.2.2 ***Teacher initiated***

7.2.3 ***TV/DVDs***

7.3 ***Nap time***

***---------------------------------------------------------------------------------------------------------------------***

\*\*Bolded categories indicate that they were observed in this study.

\*\*Categories not bolded or italicized indicate that they were not observed in this study.

\*\*Italicized categories indicate that they were added to Dr. Roulston’s original schema.

As a researcher, I gave much thought to the choice of music category and paid close attention to the need for consistency in coding. The narrative helped considerably in maintaining coding consistency, and music use categories were checked and re-checked for consistency. Additionally, I analyzed categorical data were analyzed using SPSS frequency counts and cross tabulations. Narrative data served illustrative purposes only. Theme analysis was not conducted on the narrative data, as the themes are captured by the music categorization system. Finally, I compared the categories to the analysis of how well the students faired on the teacher bi-weekly assessments.

**Validity and Reliability**

In this case study, I used member checking, low inference descriptors to validate the information.

**Data Triangulation**

For this study, observations, reflections, interviews, and teacher assessments were used to collect the data. The validity in this case study was increased through the use of all four sources. Cross checking the data allows conclusions to be drawn.

**Analysis**

Table 3. Part of a sample chart of how results were compared using the teachers assessments.

|  |  |  |
| --- | --- | --- |
| Student | With music  (student mastery) | Without music  (student mastery) |
| Phonemic Awareness |  |  |
| Letter Recognition |  |  |

I applied the techniques of the Constant Comparison Model while compiling my data. This procedure me to process the information more accurately. Once I gathered and reviewed all data, I concluded the study.

**Conclusion**

The results indicated that when music was used during instruction, the students’ retention level was higher and that less time was needed for review. The results of this study indicate that music perception skill is reliably related to phonological awareness and early reading development. Furthermore, music perception is predictive of reading skill even when the variance shared with phonological awareness is removed, suggesting that skill in music perception is related to auditory or cognitive mechanisms beyond those tapped by phonological awareness. It is important to note that the tasks used in this study measure beginning music and reading skills. The children in this study are in the early stages of letter identification or at most read a few words. Thus the relation being discussed is between early reading and early music development. These results are broadly in agreement with previous studies that have examined the relation between music and reading.

In conclusion, there does seem to be strong evidence supporting the use of music during instruction to increase students’ level of retention. The use of music also speeds up the rate at which the students acquire the material. Language and music are closely connected in brain processing by pitch, rhythm, and syntactical phrasing. Music familiarizes students with these connections and provides a fun and relaxing way to acquire, process, and produce English. The use of music, art, drama, or any creative adaptations for teaching and learning depends on the individual styles of the teacher and the students’.

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