

**THE EFFECT OF SONGS AND CHANTS WITH WORDS ON
PHONOLOGICAL AWARENESS IN EARLY CHILDHOOD**

by

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ABSTRACT

During the earliest years of life, a child's music aptitude fluctuates based on the richness and diversity of musical experiences a child encounters (Gordon, 2012, 2013), while phonological awareness—the ability to identify and manipulate individual sounds within words—is also expected to develop at a rapid rate (Golinkoff & Hirsh-Pasek, 2000; Molfese & Molfese, 1979). Some researchers have explored (a) the similarities between music learning and phonological awareness development (Anvari, et al., 2002; Lucas & Gromko, 2007) and (b) the effect of music instruction on phonological awareness skills (Bolduc & Lefebvre, 2012; Escalda, et al., 2011; Gromko, 2005), but little research exists that specifically examines the effects of songs and chants with words on phonological awareness in young children. The purpose of this study was to examine the effect of songs and chants with words on the phonological awareness of children ages three to four. The study took place over the course of five weeks at a preschool in the Northeastern region of the United States with two intact preschool classes of children ages three to four (N=10). Both groups participated in 10 music classes over the course of five weeks; the control group (n=3) was taught using songs and chants without words, and the experimental group (n=7) was taught using songs and chants with words.

To examine the effectiveness of the intervention (the music classes with words), the researcher administered the phonological awareness subtest of the Preschool Early Literacy Indicators (PELI) test before and after the five weeks of music instruction (Good & Kaminski, 2019). Afterwards, the researcher analyzed the data using an independent samples t-test ($p=.05$).

The null hypothesis for the research question was rejected; the control group showed significant improvement after music classes without words $t(9)=2.639$, $p<.05$. The two conclusions drawn from this pilot study were as follows: (a) Songs and chants with words do not affect the phonological awareness of children ages three to four and (b) Songs and chants without words increase the phonological awareness of children ages three to four. Since this study did not meet the assumptions for sample size, it is considered a pilot study. This study holds implications for both early childhood music teachers and classroom teachers who are looking to improve inclusivity in the classroom and implement activities that improve phonological awareness in their lessons. Teaching music classes with songs and chants on a neutral syllable may allow teachers to integrate explicit interventions for students with specific learning needs and implement a universal design for learning.

Chapter 1

LITERATURE REVIEW

Introduction

Children learn language and music at a rapid rate in the earliest years of their life. In this thesis, I address the intersection of music learning and phonological awareness development, exploring how music instruction may impact children's phonological awareness. Therefore, this literature review will address literature surrounding four major aspects of early childhood: early childhood music development, early childhood music instruction, language development, and phonological awareness instruction. After addressing these four components, I will present literature on both musical development and phonological awareness as a whole. This literature review provides context to the purpose of this study: to examine the effect of songs and chants with words on phonological awareness in early childhood.

Music Development in Early Childhood

The process of musical development typically begins before birth; in utero, children can hear and discern a mother's singing voice, live music, and musical recordings (Woodward, n.d.). Once a child is born, they can respond to musical stimuli, though they have little consciousness of their environment (Gordon, 2013; Valerio et al., 1998). From birth through age two to four, children absorb the sounds within their musical environment. Children may randomly respond to music during

these times by babbling or moving during musical engagement (e.g., moving an arm or leg randomly, making a sound or noise unrelated to music). A child may also provide purposeful responses, moving or babbling in a manner that directly relates to the musical sounds they are hearing (e.g., bouncing to the beat of a song, making a sound that matches the resting tone). This period of acculturation acts as the groundwork for further musical development (Gordon, 2012, 2013; Valerio et al., 1998). From age two-four to age three-five, children are often able to participate in music consciously, responding to the environment. Many children purposefully imitate tonal and rhythm patterns at this time, though they may not be accurate with a clear preparatory breath or clear singing voice. Conscious participation allows the child to eventually recognize the movements and sounds they produce are different than those within their musical environment. Once children are able to make the distinction between themselves and others around them, they begin to imitate musical sounds—such as tonal patterns and rhythm patterns—with some tonal or rhythmic accuracy (Valerio et al., 2006). Between ages three-five to four-six, children become increasingly self-aware, noticing their own lack of coordination between singing, chanting, moving, and breathing. The child's ability to sing and breathe or chant and move with coordination is challenged as they recognize they have the ability to adjust these musical components (Gordon, 2013; Valerio et al., 1998). Finally, children gain the ability to coordinate singing and chanting with breathing and moving. Once a child gains the ability to coordinate, they have a significant groundwork for future musical engagement and will be able to audiate (Gordon, 2012, 2013; Valerio et al., 1998). From age six to age nine, children usually engage in formal music instruction through a school program. At age nine, music aptitude no longer changes based on outside

musical engagement; this emphasizes the importance of having children engage in music as much and as early as possible. If children are able to audiate before age nine, their potential to achieve in music is higher than children who cannot (Gordon, 2012).

Music Instruction in Early Childhood Classrooms

Children engage in a wide array of musical experiences throughout childhood. Their musical involvement may range from absorbing and participating in musical activities in the home, engaging in music during day care, attending early childhood music classes taught by a certified teacher, or some combination of these. While any musical exposure during early childhood is valuable, music researchers suggest specific means for engaging children with music.

Early childhood music teachers often have the knowledge base about musical development that influences their teaching methods and decisions. Similar to language learning, there are foundational aspects of music learning that aid musical development and guide the focus of music teachers when lesson planning and teaching (Burton, 2011; Gordon, 2012; Valerio et al., 1998). For instance, some researchers suggest the importance of modeling free-flowing movement and a good singing voice in order to encourage the same type of movement and singing from children (Flohr & Persellin, 2011; Gordon, 2013; Reynolds, 1995; Valerio et al., 1998). Similar to language learning, if children are exposed to good modeling at an early age, they are able to learn the behaviors of others through enculturation rather than repeated verbal instruction. Music teachers should focus on acculturating children to a wide variety of tonalities and meters during early childhood to provide a rich musical vocabulary (Burton, 2011; Gordon 2012; Valerio et al., 1998). By acculturating children to many types of music and building their listening vocabulary, children have the opportunity

to gain a strong understanding of all aspects of music, including performing, reading, writing, and improvising (Burton, 2011; Gordon, 2013). All of these elements combined help children begin audiating, which many researchers believe is the foundation of musicianship (Gordon, 2013; Valerio et al., 1998). Gordon (2012) established audiation as the ability to “hear and comprehend music for which the sound is no longer or may have never been present” (p. 21). With these understandings, children are able to develop a reliable musical foundation that serves as a baseline for music achievement throughout their lifetime (Gordon, 2012). Early childhood music teachers often make an effort to teach with a keen eye toward musical development.

The musical engagement within classroom settings often differs from musical instruction guided by a certified early childhood music teacher. In some classroom or day-care settings for children under the age of four, teachers often feel they aren’t qualified to teach music or plan music activities for their students (Nardo et al., 2006; Neelly, 2002; Scott-Knasser, 1999). In settings where teachers do not feel qualified, the amount of time students have to engage with music varies from program to program. While teachers in early childhood classrooms often understand the importance of music during these early years, most do not know what a high-quality, early childhood music education program entails (Scott-Knasser, 1999). As a result, music can often become a background addition to class. Teachers who incorporate music in their classrooms might use it as a tool to engage students in cleaning up or group singing (Nardo et al., 2006; Roulston 2006). Neelly (2002) observed teachers singing during their daily classroom routine, such as transition times, circle gatherings, or as a free-play choice for students. Teachers may also incorporate rhythm and

musical movement as a method of regulating motor, sensory, and self-regulatory functioning (Williams, 2018). Though researchers have gained great insight regarding musical development, implementation of consistent high-quality music instruction remains inconsistent.

Language Development in Early Childhood

Music researchers have compared the process of learning music to the process of learning a language; similar to music, learning a language is a process that begins at birth (Golinkoff & Hirsh-Pasek, 2000). From the moment a child is born, linguistic stimuli have a separate processing center in the brain—different from the brain’s processing center for nonlinguistic stimuli—meaning the human brain has evolved to expect linguistic stimuli from the very start of life (Molfese & Molfese, 1979). The first aspect of speech a child is able to hear and comprehend are the acoustic properties of words (Golinkoff & Hirsh-Pasek, 2000). Approaching four and a half months, babies are able to recognize the sound pattern of their own names and have associated meaning with common words, such as “mommy” and “daddy.” When a child hears these identifying words at this young age, they respond to the stimuli by looking in a certain direction; this phenomenon is known as the Intermodal Preferential Looking Paradigm (Golinkoff et al., 1987; Hirsh-Pasek & Golinkoff, 1996). Once a child is eighteen months old, they have a comprehension vocabulary of about 100 words and a spoken vocabulary of about 50 words. The developments in language acquisition occur quickly once the child turns two; at this age, a child can comprehend subject-verb-object relations and is responding appropriately when responding in conversational interaction (Menyuk, 1995). As children approach age three, they experience a substantial amount of growth as sentences become more complex and

follow syntax and grammar rules of the language they are learning. Around this time, children typically begin reading words; as a result, they display specific phonological awareness skills (Gray & McCutchen, 2006; Phillips et al., 2008).

One of the most crucial and specific developments begins around age three, when a child starts to develop phonological awareness—the ability to identify and manipulate the sounds within words, regardless of their meaning (Gray & McCutchen, 2006; Phillips et al., 2008). Phonological awareness acts as an umbrella term, encompassing several other skills; this includes segmenting words into syllables, blending sounds, rhyming, and identification and segmentation of initial and final word sounds (Schuele & Boudreau, 2008). Phonological awareness is highly important for a child's language development; it is a specific aspect of phonological processing that is highly predictive of a child's later reading and spelling abilities (Ehri et al., 2001; Gray and McCutchen, 2006; Snow et al., 1999; Storch & Whitehurst, 2002). Most students who display difficulties when learning to read have a deficit in phonological awareness and related processing skills (Share & Stanovich, 1995; Wagner et al., 1997). By age four, a child typically produces both simple and complex sentences with relation markers, which gives their ideas more flow and association (Menyuk, 1995). At age six or seven, a child enters formal schooling, and has acquired most of the language skills they need to start formal instruction. By age nine, most typically developing children have acquired all speech sounds in their first language (Rudd & Kelley, 2011).

Phonological Awareness Instruction in Early Childhood Classrooms

While some researchers have found that much of language development occurs through imitation (Menyuk, 1995; Messum & Howard, 2012), other researchers posit

that children require deliberate teaching and practice opportunities to gain a full understanding of phonological awareness skills (Phillips et al., 2008). If teachers choose to incorporate phonological awareness skill development in their classroom, researchers suggest they utilize systematic and explicit instruction with clear and consistent articulation when teaching and reviewing words/word sounds. To best benefit their students, teachers should also familiarize themselves with continuous and stop sounds, to aid in the clarity and consistency of word pronunciation (Phillips et al., 2008). When designing activities, teachers should focus on the following areas: segmenting words, rhyming, identifying initial and final word sounds, segment initial and final sounds, and blending sounds and segments into words (Schuele & Boudreau, 2008). For example, an activity for segmenting words would involve segmenting two-syllable compound words (e.g. trashcan, notebook). Then, once a child is able to segment two-syllable compound words, the next activity would focus on two-syllable words (e.g. candle, binder) (Schuele & Boudreau, 2008). Other activities for these steps might include clapping on syllable units (segmenting words), thinking of words that rhyme with one another (rhyme), and putting individual letter sounds together to make words (blending). In terms of scaffolding learning, using hand symbols, props, pictures, or word markers/separators can help students with a visual/tactile learning styles understand different phonological awareness activities (Phillips et al., 2008).

Though researchers suggest scaffolding phonological awareness development in specific orders, one should view the development of skills as a continuum, not a sequential-stage model. Children can acquire the phoneme awareness skills at any time during early childhood; they do not need to master one skill before moving to another. Since children in a nursery school or preschool classroom will exhibit skills

that range along this continuum, there is debate on how to go about teaching phonological awareness. While some researchers believe it is more beneficial to meet individual students where they are with instruction or intervention tactics, others believe it is more beneficial to teach all students at one level as if they were at the same place on the continuum. There is no empirical evidence that either method is more effective than the other (Phillips et al., 2008). Using either method, the benefits of phonological awareness instruction remain clear; phonological awareness instruction during developmental years have been shown to improve students' spelling and reading achievement over time (Gray & McCutchen, 2006).

Though research suggests that phonological awareness instruction in early childhood has immense benefits for reading and writing skills later in life (Ehri et al., 2001; Gray & McCutchen, 2006), most preschool teachers do not deliberately incorporate such instruction in their classrooms (Phillips et al., 2008). Early childhood teachers may not incorporate phonological awareness instruction for a number of reasons. Spencer et al. (2008) found that some teachers lack the pedagogical understanding of phonological awareness as well as accurate teaching materials. Another challenge when practicing phonological awareness skills in the English language relates to the lack of emphasis on individual phonemes when speaking the language itself. When teaching phoneme separation skills, teachers speaking English must deliberately separate each syllable sound, because English-speakers do not use these individual phonemes in typical day-to-day conversations. Because of these challenges, children often do not receive sufficient instruction to aid them in later skills, like spelling, reading, and writing. (Spencer et al., 2008).

Early Childhood Music and Phonological Awareness

Researchers in the field of music education have directly compared learning music to learning a language (Burton, 2011; Gordon, 2012, 2013). Tonal and rhythm patterns act as the building blocks for music in the same manner that parts/sounds of words act as the building blocks of language (Golinkoff & Hirsh-Pasek, 2000; Gordon, 2013). Both music education and language researchers refer to understanding these building blocks as a child “breaking the code” to enable further development in music or language (Gordon, 2013, Phillips et al., 2008).

While music learning and phonological awareness exist as two independent aspects of development, researchers have noted a large number of similarities between musical processing and phonological processing (Anvari, et al., 2002; Lucas & Gromko, 2007). A study by Anvari et al. (2002) showed a significant correlation between musical skills, phonological awareness, and reading development in 100 four- to five-year-old children. Another study by Lucas and Gromko (2007) examined the relationship between discriminating between musical patterns and phonemic segmentation. Children’s ability to distinguish discrete phonemes (e.g., “cat” = “/c/ + /a/ + /t/”) had a strong, positive correlation with their ability to distinguish if tonal and rhythm patterns were the same or different.

Researchers have not only explored the correlation between music and language learning but have also investigated the effects of music on language acquisition skills (Bolduc & Lefebvre, 2012; Escalda, et al., 2011; Gromko, 2005). Bolduc and Lefebvre (2012) assessed the efficiency of four learning conditions to develop phonological processing skills. The researchers met with eight kindergarten classes (n=100) for 40 minutes per week over the course of 10 weeks. They paired the classes and assigned one of the following interventions to each group: (a) nursery

rhymes supplemented by musical activities, (b) nursery rhymes supplemented by language activities, (c) nursery rhymes supplemented by musical and language activities, and (d) 15 minutes of free exploration supplemented by recorded nursery rhymes. Children who engaged in conditions a, b and c significantly improved their phonological awareness and their invented spelling skills. However, children's scores at the verbal memory task only improved significantly with the integration of the music component. Though supplementing nursery rhymes with language activities bolsters emergent literacy skills, the addition of musical activities can also boost phonological processing skills. Other researchers have investigated the phonological awareness of children who participated in music during early childhood. Escalda et al. (2011) researched the auditory processing and phonological awareness skills of five-year-old children with and without musical experience. The researchers concluded that musical experience improved the metalinguistic abilities of five-year-old children. Researchers have also explored the effects of musical intervention on a specific aspect of phonological awareness. Gromko (2005) conducted a study to examine the effect of music instruction on phoneme segmentation fluidity in early childhood. The kindergarten class who received four months of music instruction had significant gains in phoneme segmentation fluidity in comparison to those who did not receive music instruction.

While some researchers have explored the (a) the similarities between music learning and phonological awareness development (Anvari, et al., 2002; Lucas & Gromko, 2007) and (b) the effect of music instruction on phonological awareness development (Bolduc & Lefebvre, 2012; Escalda, et al., 2011; Gromko, 2005), little research exists that specifically examines the effect of songs and chants with words on

the phonological awareness of young children. Perhaps a child's exposure to language and music (music classes with words) would positively impact children's phonological awareness skills. Therefore, the purpose of this study was to examine the effect of songs and chants with words on the phonological awareness of children ages three to four. The research question investigated was as follows: Do songs and chants with words affect the phonological awareness of children ages three to four?

Chapter 2

STUDY DESIGN

Purpose and Research Questions

The purpose of this study was to examine the effect of songs and chants with words on the phonological awareness of children ages three to four. The research question investigated was as follows: Do songs and chants with words effect the phonological awareness of children ages three to four?

Overview of the Study

As the teacher-researcher, I utilized a quantitative quasi-experimental design to collect data in January and February 2020. The study took place over the course of five weeks at an early childhood center in the Northeastern region of the United States with two intact classes of children ages three to four (N=10). Both groups participated in 10 music classes over the course of five weeks. I used songs and chants with words while working with the experimental group (n=7) and the same songs and chants without words, utilizing a neutral syllable instead, with the control group (n=3). To examine the effectiveness of the intervention (the music classes with words), I administered the phonological awareness subtest of the Preschool Early Literacy Indicators (PELI) test before and after 10 music classes (Kaminski et al., 2018a). Afterwards, I analyzed the data using a two-tailed, independent samples t-test ($\alpha = .05$).

Rationale for Quantitative Design

As the teacher-researcher, I sought to examine the differences in the pretest and posttest PELI Scores of two groups: the experimental and control group. For the purpose of this study I compared two circumstances, which led to the use of a

quantitative design. There are two commonly used types of quantitative design: true-experimental design and non-equivalent control group design (also known as quasi-experimental). Due to the inability to randomize groups, the design of this study was quasi-experimental (Creswell, 2014). The quasi-experimental design is most typically used in quantitative research in the area of education due to the availability of intact groups (Creswell, 2014; Phillips, 2008). The control and experimental group were two intact groups chosen using convenience sampling. I randomly identified which classroom was control and experimental, applied a specific treatment to the experimental group, and analyzed the difference between change in scores in the control and experimental group (Phillips, 2008).

Role of the Researcher

Due to my experience as an early childhood music educator, I positioned myself as both the teacher and researcher. Therefore, I will refer to myself throughout this study as the teacher-researcher. I have completed courses within the music education department at the University of Delaware that directly address early childhood and elementary music teaching, attended and earned my early childhood music certification at the Gordon Institute for Music Learning Early Childhood Professional Development Levels Course, and I have taught early childhood music classes weekly for three years. The early childhood center chosen for this study did not have a music teacher on site, and the classrooms I worked with did not have a consistent time for an early childhood music program established. Though quantitative researchers tend to distance themselves from subjects, my experience as an early childhood music educator and the lack of established music program at the early childhood center led me to act as the teacher and researcher for this pilot study.

As the teacher-researcher, I taught 10 music classes to all of the students enrolled in two classrooms and administered the phonological awareness section of the PELI pretest and posttest to the control group (n=3) and experimental group (n=7). The Preschool Early Literacy Indicators test (PELI) is designed for classroom teachers to assess children's literacy growth over a period of time (Kaminski et al., 2018b). Since the purpose of the PELI is to assess students' growth, I administered the phonological awareness subsection of the PELI as a pretest and posttest to the students in the music class I taught. I taught ten music classes to both classes of children between the pretest and posttest.

Rationale for Measurement Tool

The Preschool Early Literacy Indicators (PELI) is a measurement tool created by Acadience Learning designed for teachers to assess specific aspects language learning. The developers designed this test specifically for children ages three to five (Kaminski et al., 2018b). The PELI consists of an initial screening test and follow-up progress assessments of early literacy and language skills for preschool children. The full test includes several subsections that include activities that assess the following literacy and language skills: (a) phonological awareness, (b) alphabet knowledge, (c) vocabulary and oral language, and (d) comprehension, all within a storybook format. (Kaminski et al., 2014).

The PELI is a newly developed test and has undergone extensive research through a series of studies since 2009 to determine validity and reliability. Inter-rater reliability of the various PELI books ranges from .96 to .99 (Kaminski et al., 2014). Criterion-related validity of the individual subtests of various forms of the PELI with criterion measures of early literacy (i.e., Test of Preschool Early Literacy, Get Ready

to Read) range from .28 to .92 (Bravo Aguayo & Kaminski, 2012; Kaminski et al., 2014). Another study found the reliability of the PELI phonological awareness subtest to be .57 to .65, with a median of .64 in comparison to the Dynamic Indicators of Basic Early Literacy Skills First Sound Fluency test, the established phonological awareness test used for students in Kindergarten (Kaminski et al., 2014). Because this test and subtest were accessible to me as an undergraduate, I decided to utilize the phonological awareness subsection as the measurement tool for the study.

Method

In this study, I worked with two intact groups of children at a local lab preschool. I utilized the first two days of the study to conduct the PELI pretest, spent ten days teaching 25-minute music classes to both classes, and spent two days conducting the PELI posttest. I used the script from the PELI book for both pretest and posttest and incorporated a consistent song selection for both classes. The music classes differed in one aspect: I taught Preschool One (N=9) using song and chants on a neutral syllable and Preschool Two (N=14) using songs and chants with words. For inclusion in the study, students had to attend 8 out of 10 music classes; this ensured those taking the posttest were present for a substantial amount of music classes with or without words. The students who met the requirements for inclusion in Preschool One became the control group (n=3). Those students who met the requirements in Preschool Two became the experimental group (n=7).

Participants

Prior to recruiting participants for this study, I took the online human subjects training course by the Collaborative Institutional Training Initiative (CITI) (see

Appendix A) and received approval by University of Delaware's Institutional Review Board (IRB) (see Appendix B). Once I obtained IRB approval, I presented the outline for my study to the administration at the early childhood center, and one of the administrators selected two classes of children to partake in this study. I taught music classes to two intact groups of children ages three to four (N=23). For the purpose of this study, I will refer to the classes as Preschool One (N=9) and Preschool Two (N=14) classrooms. I administered the PELI phonological awareness subsection to students who returned parental permission forms and the posttest to participants who attended at least eight of the ten music classes, resulting in the Preschool One control group (n=3) and the Preschool Two experimental group (n=7).

The students in Preschool One (N=9) served as the control group in this study. In Preschool One, there were a total of nine students present in the morning block during music classes, six female and three male. Out of these students, only four returned permission forms allowing the PELI testing; the others were given permission to participate in the music class, but not the PELI test. I administered the phonological subsection of the PELI pretest to all four students. To be given the posttest, the students had to be present for at least 8 of the 10 music classes. Three of the four given permission were in attendance for at least 8 of the 10 music classes held, so I was able to administer the posttest to these three students. Therefore, I analyzed data for a control group of three (n=3) subjects.

Preschool Two (N=14) served as the experimental group in this study. In Preschool Two, there were a total of 14 students present in the morning block during music classes, four female and 10 male. Out of these students, 10 returned permission forms allowing the PELI testing; the others were given permission to participate in

music only. I administered the pretest to nine of these students; one student was not present during both pretest days. Seven of the nine who took the pretest were in attendance for at least 8 of the 10 classes held; I administered the posttest to these seven students. Therefore, I analyzed data for a control group of seven ($n=7$) subjects.

Setting

I completed this study at an early childhood center in the northeastern region of the United States. The center where this study took place is a full-day education center for children from birth to second grade. I worked in a total of four spaces in my time at the early childhood center: (a) Preschool One classroom, (b) Preschool Two classroom, (c) the research room, and (d) a day-school age classroom. Situated down a long hallway, the preschool wing held both Preschool One and Preschool Two classrooms. The Preschool One room faced the hallway, with no windows leading outside and opposed to the Preschool Two classroom in the hallway. Both classrooms included individual cubbies that lined one wall, a reading center, child-sized tables with chairs, and a large rug for group activities and play. Walking into the Preschool One classroom, a visitor could easily see the reading center and children's tables near the back of the room, along with the cubbies standing against a wall to the right and the large rug placed on the floor in front of the cubbies. The Preschool Two classroom had a door and two large windows in the back of the room that led outside. Upon walking into the Preschool Two classroom, the child-sized tables and chairs stood near the forefront of the room. The teachers had situated the reading center near the right wall with the cubbies lining the left. Similar to the Preschool One classroom, the large rug laid on the floor in front of the cubbies. In both classrooms, the early childhood music classes took place on the large rug the class used for morning meetings and

group activities. For each music class, the students sat on the large rug in a circle. We occasionally stood in a circle or moved around the room depending on the activity for each song. Two teachers were present in the classroom at all times while I was in the classroom.

The students completed the pretest in the research room, a room that served a few purposes for the early childhood center. The research room functioned as a designated planning space for teachers and an area for individuals conducting research. I pulled the students in both the control ($n=3$) and experimental ($n=7$) groups out of their classroom for approximately ten minutes to complete the pretest. I walked each child away from the preschool wing down a long hallway to the research room. A conference table stood in the center of the room and several desktop computers lined the back wall. The room also contained a small, child-sized table and two small chairs for research use directly inside the door. I conducted the pretest at this table.

Situated down a much longer hallway, the day-school age classroom held the same contents as the Preschool One and Preschool Two classrooms. The second PELI test took place in this room due to other researchers using the research room. The students completed the posttest at the same type of child-sized table and chairs as the pretest, only located in the day-school age room. For each test, I sat in the right chair and the student sat in the left and read from the book on the table.

Procedure

I visited the early childhood center fourteen times during the full month of January 2020 and the beginning of February 2020. During this time, I administered the phonological awareness pretest and posttest to two intact groups of children and taught

10 music classes to both groups using songs and chants on a neutral syllable in the control group (n=3) and songs and chants with words in the experimental group (n=7).

Phonological Awareness Pretest. On January 3 and 6, I arrived at 9:00 a.m. and stayed until 11:30 a.m. to administer the PELI pretest to students in attendance. The pretest took place during free time and breakfast for both Preschool One and Preschool Two. I pulled out students who were given permission to be tested in alphabetical order. Students did not miss any instructional time to participate in the study. Since parents may drop off their children at any time, some students arrived during the 9:00 a.m. to 11:30 a.m. block. I skipped over students that had not arrived when I reached them on the list and returned to them later or on the second day. I administered the Preschool Early Literacy Indicators (PELI) phonological awareness subtest to all the students in the class who returned the IRB permission forms assenting to participate in the test.

For each pretest, I arrived at the classroom, introduced myself, and asked one student if they would like to play a reading game. Once the student was comfortable and agreed, I walked them from their classroom to the research room. In order to establish rapport and a level of comfort, I asked the student about their favorite book, animal, or superhero as they walked to the room. Upon entering the research room, the child sat in the left chair at the small, child-sized table, and I sat down in the right chair. I had the pretest book, *Getting a New Puppy*, set up on the last page where the phonological awareness component was located. I introduced each child to the characters on the page, a young boy named Owen and his dog Spot.

I then initiated the phonological awareness test. I read the script on the final page of the book and explained that I needed the student's help putting some items,

themed to the story, into Spot's doghouse. For the first part of the test, I showed the student a picture of a two-part word (e.g. baseball, washcloth, collar, pillow), named the object in the picture aloud, and asked the student to tell me the first part of the word (e.g. base, wash, /kol/, /pil/). I walked the child through an example, using the same model as above. During the example, if the student did not answer correctly the first time, I followed the printed script, saying, "Shoe is the first part of the word shoelace. Say it with me, 'shoe.' What is the first part of the word shoelace?" (Kaminski et al., 2018a). If the student answered incorrectly again, I followed the printed script, saying, "Shoe is the first part of the word shoelace. Say shoe and put it in the doghouse." After providing the example, I began part one of the pretest. For each question, I showed the student the picture card and said, "This is a baseball. Can you tell me the first sound in the word baseball?" (Kaminski et al., 2018a). The student could earn one point by answering, "/b/," "/bai/," or, "base." If the student did not answer with any of those responses, they did not receive a point for that question. Regardless of the response, I allowed the child to put the picture in the doghouse. If the student did not correctly answer any of the five questions in part one, I used the optional discontinue option provided in the PELI instructions and did not move on to section two. If the child did answer at least one question correctly, I moved on to section two.

I continued to read the script found on the final page of the book. For the second part of the test, I showed the student a picture of a word (e.g. treat, rope, bowl, comb, sock), named the object in the picture aloud, and asked the student to tell me the first sound in the word (e.g. /t/, /r/, /b/, /k/, /s/). I walked the student through an example, using the same model as the questions. The example used the word mat, with

the first sound in the word being /m/. During the example, if the student did not answer correctly the first time, I followed the printed script, saying, “/m/ is the first sound in the word mat. Say it with me, ‘/m/.’ What is the first sound in the word mat?” (Kaminski et al., 2018a). If the student answered incorrectly again, I followed the printed script, saying, “/m/ is the first sound in the word mat. Say /m/ and put it in the doghouse.” After providing the example, I began part two of the pretest. The following five questions went as follows: I said, “This is a treat. Can you tell me the first sound in the word ‘treat’?” and the student could earn two points by saying, “/t/,” and one point by saying, “/tr/,” or, “/trea/.” (Kaminski et al., 2018a). If the student did not respond with any of those options, they received zero points for that question. Regardless of the response, I allowed the child to put the picture in the doghouse.

If students were off task during the pretest, I gently guided them back to the topic, by either repeating the question or saying, “Remember to tell me the first part/sound of the word.” Once the test was complete, I thanked each student for their help and walked them down the hall to their classroom. I signed the student back in and moved down the list of students who had permission slips returned.

Early Childhood Music Classes. The early childhood music classes took place on the following ten dates: 1/8, 1/9, 1/10, 1/27, 1/28, 1/29, 1/30, 1/31, 2/3, and 2/4. For these ten days, I arrived at the early childhood center at 8:55 a.m. to set up my video camera and settle myself in each class. I taught all music classes during the same hour, but alternated which class occupied the first block due to their preexisting schedules. The classes were about 25 to 30 minutes, and the first class started between 9:00 a.m. and 9:05 a.m. and ended at 9:25 a.m. to 9:30 a.m. The second class began at 9:30 a.m. to 9:35 a.m. and ended at 9:55 a.m. to 10:00 a.m. Once I arrived in the

classroom, the teachers gathered the students on the rug and had them sit in a circle. After arriving in each classroom, I set up my camera and sat on the rug with the students. As is the case with many teachers, I used the video footage to watch and reflect on my teaching during the lessons from the day. I used the videos for planning purposes and keeping track of attendance in the classes. The video was promptly deleted each day and did not serve as data for this study. After setting up the video camera and gathering the students on the rug, I proceeded with the activities I had organized for the day, starting with a “hello” song. I selected the songs and chants for each daily class from the following early childhood music books: *Music Play*, *Growing Up with Music*, *Musicianship*, and *Jump Right In* (Bolton, 2014; Sigmund, 2006; Taggart et al., 2000; Valerio et al., 1998). I included songs in a variety of tonalities (major, minor, dorian, mixolydian, phrygian, lydian), and meters (duple, triple, and unusual). These criteria were put in place so that students would have the opportunity to hear a variety of tonalities and meters, as suggested by many experts in early childhood music (Burton, 2011; Gordon, 2012). Using this criterion, I created a repertoire list, organizing the songs, and chants, and notes for activities in a table (See Appendix C). I utilized the repertoire list when selecting songs and chants for classes, using a different, but diverse, selection of songs/chants for each day. I performed each short song or chant, and then led the students in a movement activity, tonal activity, or rhythmic activity. I sang/chanted the song/chant, then modeled continuous flowing movement and sang tonal or rhythm patterns on a neutral syllable. I occasionally sang/chanted the song/chant again for context. In Preschool One (control), I performed all the songs and chants, tonal patterns, and rhythmic patterns on the neutral syllables “bah,” “dah,” “bum,” and “dum” (as suggested by music researcher, Edwin Gordon).

In Preschool Two (experimental), I performed all the songs and chants with words, and the tonal and rhythmic patterns on a neutral syllable. Throughout the entire activity, I was not expecting any sort of response from the children and did not correct them if they were trying to imitate the songs or patterns. Through the music classes, the goal of the was to immerse students in a variety of music (Gordon, 2012).

Phonological Awareness Posttest. On February 5- 6, 2020, I arrived at 9:00 a.m. and set up the posttest materials in the day-school age classroom. I administered the posttest to students who were present for at least 8 of the 10 classes. I left the early childhood center at 11:30 a.m. The posttest also took place during the children's free time, so they did not miss any instruction. I tested students who were present for at least eight music classes and had parental permission forms returned. The procedure for the posttest was modeled directly after the pretest, with the only difference being a new book titled, *On the Farm*. Students identified the first part of a given word in part one of the test. In part two, I asked students to identify the first sound of a word. The characters introduced to the student were Farmer Jane and her horse. The objective was to put the items into a wagon, rather than a doghouse. The items were themed based on a farm.

Limitations and Delimitations

Due to travel restrictions, closures, illness, and scheduling between the researcher and the early childhood center, the actual schedule differed from the plan originally proposed for the study. I requested to teach ten early childhood classes over five weeks with two classes each week. Instead, I held the classes on three consecutive days during week one, five consecutive days during week two, and two consecutive days on week three (1/8, 1/9, 1/10, 1/27, 1/28, 1/29, 1/30, 1/31, 2/3, and 2/4). Due to

these scheduling limitations, classes did not place at consistent times. On January 1/10, 1/27, 1/31, 2/3 and 2/4, I taught Preschool One first (from 9:00 – 9:25 a.m.), and on 1/8, 1/9, 1/28, 1/29, and 1/30 I saw Preschool Two first (from 9:00 – 9:25 a.m.). This change was due to their scheduled gym time. While the time was not consistent, I saw each class during the first block five times. After the first time teaching music classes both groups of children, I adjusted the times of the class from 30 minutes to 25 minutes. The overall punctuality of the classes and logistics of gathering students on the rug took more time than I had allotted, and adjustments were made to have the classes start at 9:05 a.m. and 9:35 a.m., respectively.

This study was done with the resources available to me as an undergraduate, causing some limitations. Most quantitative studies utilize a model where the researcher is removed from the subjects and does not act as the teacher as well (Phillips, 2008). If this study were to be repeated, removing the element of the teacher-researcher would make the process more objective. In general, quantitative studies are also expected to have greater than 40 total subjects to meet assumptions for sample size (Phillips, 2008). This study had 10 student participants: 3 students in the control group and 7 in the experimental group. It is also highly recommended to have the participants drawn from a greater population; this was not possible since intact groups were used. As a result, this study did not meet assumptions for sample size, which resulted in a pilot study. The validity and reliability of the phonological awareness subsection of the PELI was questionable. However, as an undergraduate student, this was the measurement tool to which I had access.

Chapter 3

DATA ANALYSIS AND RESULTS

Purpose and Research Questions

The purpose of this study was to examine the effect of songs and chants with words on the phonological awareness of children ages three to four. The research question investigated was as follows: Do songs and chants with words effect the phonological awareness of children ages three to four?

Data Analysis

The null hypothesis for this study was that there would be no significant difference in phonological awareness of children ages three to four when comparing the students who participated in the music class with words to those enrolled in the music class without words. I administered the phonological awareness subtest of the Preschool Early Literacy Indicators (PELI) assessment (Kaminski et al., 2018a) before and after 10 classes of music instruction. In order to examine the effect of the treatment (songs/chants with words) and test the null hypothesis for the research question, I analyzed the pretest scores and overall change in scores using two-tailed independent samples t-tests ($p=.05$). I also examined the raw data, means, and standard deviations of the PELI scores to observe trends.

The Nature of the Pilot Study

Researchers typically utilize pilot studies to acquire information on new treatments or measures before conducting a larger study (Patten & Newhart, 2017). Since the purpose is simply to gather preliminary information, most pilot studies use a sample size of anywhere from 10 to 100 participants, depending on the specific area of

study (Patten & Newhart, 2017). In this case, the researcher invited two classes of students from a local early childhood center to participate in the research: one class as the control group (N=9) and one as the experimental group (N=14). Due to lack of parental permission and students missing classes, the final number of subjects enrolled in the study was as follows: control group (n=3) and experimental group (n=7). Because pilot studies do not meet the expectations for sample size, the results are not generalizable, though they may be transferable.

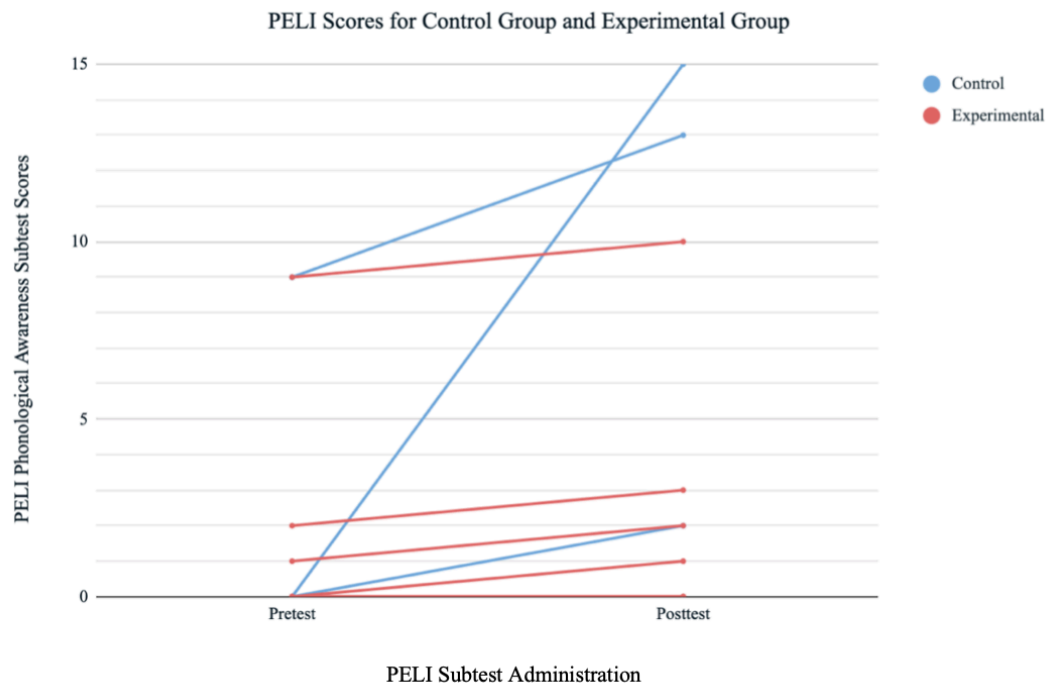
Results

The raw data of the pretest and posttest scores show interesting trends. Looking at only raw data, all students' phonological awareness either remained the same or improved (See Table 1 & Figure 1). There were no students in this pilot study that had their phonological awareness decrease from the pretest to posttest. The difference in means between the two groups shows a large contrast; the scores of the control group (M=7, SD=5.68) increased by an average of 7, a significantly larger difference than the average increase of 0.571 in the experimental group (M=0.571, SD=0.535) (See Table 2). The standard deviation of the control group (SD=5.68) was also much higher than that of the experimental group (SD=0.535).

Table 1 PELI Phonological Awareness Subtest Scores: Raw Values

	Subject	Pretest	Posttest	Difference in Score
Preschool 1 (Control)	Student 1	0	15	15
	Student 2	0	2	2
	Student 3	9	13	4
Preschool 2 (Experimental)	Student 4	0	0	0
	Student 5	9	10	1
	Student 6	0	0	0
	Student 7	2	3	1
	Student 8	0	1	1
	Student 9	1	2	1
	Student 10	0	0	0

Figure 1 Difference in PELI Scores for Control Group and Experimental Group



After collecting the data, I also performed an unpaired t-test of independent samples ($\alpha=.05$) between the pretest scores of both the control group, Preschool One (N=3) and the experimental group, Preschool Two (N=7) (See Table 2). Results indicated that this study met assumptions for normality, $t(9)=.482$, $p < .05$. The result was not significant at $p < .05$, indicating that the classes were similar in makeup.

Table 2 Means, Standard Deviations, t-values and p-values for Pretest Scores, Posttest Scores, and the Differences Between Scores

	Preschool 1 (Control)		Preschool 2 (Experimental)		<i>t</i> (9)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Pretest Scores	3	5.196	1.714	3.302	0.482	0.643
Posttest Scores	10	7	2.286	3.592	2.387	0.044
Difference	7	5.68	0.571	0.535	2.639	0.03

I also performed the independent samples t-test on the difference between the pretest and posttest scores (See Table 2). The result was significant, showing difference between the control group and experimental group $t(9)=2.639$, $p < .05$. The null hypothesis for the research question was rejected; the control group showed significant improvement after music classes without words.

Discussion

The results of this pilot study suggest that music classes without words (on a neutral syllable) may positively affect the phonological awareness of children ages three to four. Though parents and caregivers prioritize speaking to children using words for language acquisition purposes, the results from this study indicate that singing/chanting on a neutral syllable can possibly help to scaffold phonological awareness skills as well as musical skills. Researchers in music education have made

comparisons between music learning and language learning, explaining the way we learn music as a parallel to the way we learn a language (Burton, 2011; Gordon 2012). Looking deeper into the language learning comparison, both music and language learning start with enculturation: listening to the sounds that heard in one's environment and taking them in. Supplying short tonal and rhythm patterns to young children on a neutral syllable first is recommended by music researchers; using words within songs and chants may distract young children from music learning (Gordon, 2013). These building blocks for music serve the same purpose that as parts/sounds of words for language (Golinkoff & Hirsh-Pasek, 2000; Gordon, 2013). Since language learning and music learning show numerous parallels, it may be possible that using syllables or phonemes, rather than full words, in music could benefit phonological awareness at an early age.

Class size may have also played a part in the results, due to the amount of direct, individual engagement that the student in each group received from the teacher. The number of students present for music classes in the full Preschool One classroom typically ranged from four to five students—around one third of the Preschool Two classroom, which typically ranged from 12-14 students. The teachers in Preschool One allowed for more exploration and freedom during music time; they did not participate in the class, while Preschool Two's teachers did participate in order to help manage the behavior of the children in the room. The way students interacted in each classroom differed as well; many of the students in Preschool Two were not fully focused and engaged during music. I continued with instruction, under the impression the students were still absorbing and engaging, as students can be absorbing and listening while not responding (Gordon, 2012, 2013). This higher level of engagement

in activities in the Preschool One classroom may have led to the elevated scores on the PELI posttest. This may possibly explain the growth in score in Student 1 of the control group—they were interacting and responding to the songs and chants consistently and directly during the classes. Children require opportunities to hear themselves sing and speak individually in order to become proficient music and language users (Gordon, 2013). This type of interaction differed for those in Preschool Two due to the class size. It may be that students who have a chance to sing individually on a neutral syllable are those who experience the most growth in phonological awareness. These results suggest that singing/chanting on a neutral syllable may serve as a beneficial intervention to speaking, leading to many implications for practice and suggestions for future research.

Chapter 4

CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS FOR FUTURE RESEARCH

Conclusions

The purpose of this study was to examine the effects of songs and chants with words on the phonological awareness of children ages three to four. The two conclusions drawn from this pilot study were as follows: (a) Songs and chants with words do not affect the phonological awareness of children ages three to four and (b) Songs and chants sung/chanted on a neutral syllable increase the phonological awareness of children ages three to four. Since this study did not meet the assumptions for sample size, it is considered a pilot study. This study is not generalizable, though the results may be transferrable.

Implications for Practice

While the results of this pilot study indicated that songs and chants with words did not positively or negatively affect the phonological awareness of children ages three to four, the results suggested that songs and chants that are sung or chanted on a neutral syllable may positively affect a student's phonological awareness. In recent years, there has been a growing effort to create inclusive classrooms for a variety of learners both in the general classroom and music room (Jellison, 2015; Jellison & Draper, 2015). Using the findings in this study, early childhood classroom teachers and early childhood music teachers could utilize chanting and singing on a neutral syllable as a tool to promote a universal design for learning, benefitting all children in their musical development as well as bolstering the phonological awareness skills of young children. The neutral syllable may emulate a segmented part of a word or start

sound of a word, which is a primary focus during phonological awareness development (Gray & McCutchen, 2006; Phillips et al., 2008; Schuele & Boudreau, 2008). Early childhood classroom teachers and music teachers who deliver instruction with a focus on singing and chanting on a neutral syllable may directly aid students who are struggling with phonological awareness or have speech-language delays. It may also be beneficial for parents and caregivers to implement singing and chanting on neutral syllables during a daily routine, so that phonological awareness growth may extend outside of school or day-care.

Implications also arise for preservice music teachers and preservice early childhood teachers who can begin implementing these practices earlier in their teaching career. Those educating preservice music teachers should make an effort to focus on teaching their students to sing and chant on a neutral syllable. This may help preservice music teachers better understand how they can create an inclusive classroom environment, as well as an inclusive teaching environment among other educators. The same implications are present for preservice early childhood teachers, who should consider incorporating singing and chanting on a neutral syllable into their daily teaching practice. Educating preservice music teachers and preservice early childhood teachers on the musical and non-musical benefits of signing/chanting on a neutral syllable during college may shape their teaching in a way that benefits their students across multiple subject areas. Though using words is not harmful for musical development, teachers should focus on the linguistic and musical benefits to using only songs/chants on a neutral syllable during activities in the early childhood classroom environment.

Suggestions for Future Research

Many suggestions for future research are a result of the limitations and delimitations present. I recommend replicating this study with larger sample size. It would also be beneficial to look at multiple different populations; many learning programs have different curriculum that address/do not address phonological awareness and include/do not include music classes with words or on neutral syllables. It would be helpful to see if there are similar results across a wide range of early childhood learning programs. Due to the questionable reliability of the individual PELI subtests, I recommend replicating this study with a different measurement tool. This study should also be replicated with a consistent schedule and take place over a longer period of time.

There are also boarder suggestions that focus on particular populations of students that require a specialized learning environment or individualized learning plan. Replicating this study with a focus on students with speech-language delays and special learning needs could potentially provide implications for working with these students daily in the general education classroom and music classroom. Further consideration of the effects of neutral syllables on phonological awareness is recommended. It would also be beneficial to further investigate the use of a neutral syllable over a longer period of time to see is there are long-term effects on phonological awareness. I used the neutral syllables “bah,” “dah,” “bum,” and “dum” within the context of this study. However, examining the use of numerous different neutral syllables and their correlation between specific types of phonological processing skills could potentially allow teachers to integrate explicit interventions for students with specific learning needs.

The results of this study serve as a call to action for future researchers to explore the effect of musical engagement on phonological awareness in the early childhood classroom. Yet, there is still more to discover about the effects of neutral syllables on phonological processing and language development. Early childhood music educators often need to fight for their rightful place in the early childhood curriculum. Exploring non-musical benefits of music classes may create stronger grounds for higher musical involvement during early childhood. Studies that examine the effect of one discipline on another can also create a more collaborative environment among educators. With thorough research, educators can find a pathway to inclusivity not only within the music room, but in the field of education as a whole.

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Appendix A

CITI TRAINING CERTIFICATES

		Completion Date 09-Jun-2019 Expiration Date 08-Jun-2023 Record ID 31347277
This is to certify that:		
Emma Engel		
Has completed the following CITI Program course:		
Responsible Conduct of Research (Curriculum Group) Responsible Conduct of Research (RCR) (Course Learner Group) 1 - RCR (Stage)		
Under requirements set by:		
University of Delaware		
		
Verify at www.citiprogram.org/verify/?w90d39872-8d7f-4c2a-a681-6b920b65fc3c-31347277		

		Completion Date 07-Jun-2019 Expiration Date 06-Jun-2022 Record ID 31347276
This is to certify that:		
Emma Engel		
Has completed the following CITI Program course:		
Course In The Protection Human Subjects (Curriculum Group) Human Subjects Protections - Social-Behavioral-Educational Focus - All UD (Course Learner Group) 1 - Basic Course (Stage)		
Under requirements set by:		
University of Delaware		
		
Verify at www.citiprogram.org/verify/?wcc750c5b-505a-4211-9bd5-d07940e8d62d-31347276		

Appendix B

IRB APPROVAL LETTER



Institutional Review Board
210H Hulihan Hall
Newark, DE 19716
Phone: 302-831-2137
Fax: 302-831-2828

DATE: November 20, 2019

TO: Aimee Pearsall
FROM: University of Delaware IRB

STUDY TITLE: [1492344-1] The Effect of Songs and Chants with Words on Phonological Awareness in Early Childhood Music

SUBMISSION TYPE: New Project

ACTION: APPROVED

EFFECTIVE DATE: November 20, 2019

NEXT REPORT DUE: November 19, 2020

REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # (6,7)

Thank you for your New Project submission to the University of Delaware Institutional Review Board (UD IRB). The UD IRB has reviewed and APPROVED the proposed research and submitted documents via Expedited Review in compliance with the pertinent federal regulations.

As the Principal Investigator for this study, you are responsible for, and agree that:

- All research must be conducted in accordance with the protocol and all other study forms as approved in this submission. Any revisions to the approved study procedures or documents must be reviewed and approved by the IRB prior to their implementation. Please use the UD amendment form to request the review of any changes to approved study procedures or documents.
- Informed consent is a process that must allow prospective participants sufficient opportunity to discuss and consider whether to participate. IRB-approved and stamped consent documents must be used when enrolling participants and a written copy shall be given to the person signing the informed consent form.
- Unanticipated problems, serious adverse events involving risk to participants, and all non-compliance issues must be reported to this office in a timely fashion according with the UD requirements for reportable events. All sponsor reporting requirements must also be followed.

The UD IRB REQUIRES the submission of a PROGRESS REPORT DUE ON November 19, 2020. A continuing review/progress report form must be submitted to the UD IRB at least 45 days prior to the due date to allow for the review of that report.

If you have any questions, please contact the UD IRB Office at (302) 831-2137 or via email at hsrb-research@udel.edu. Please include the study title and reference number in all correspondence with this office.

Appendix C

SONGS AND CHANTS REPERTOIRE LIST

Song/Chant & Source	Source	Tonality	Meter	Brief Description of Interaction/Notes
Hello Everybody	(Burton)	D aeolian	usual duple	Minor tonal patterns, pulsating flow **No use of names since one class will not have words**
Traffic Jam	Growing Up with Music (Sigmund)	E lydian	unusual unpaired	“Here we go, beep beep beep” x2 “Driving in my car, here we go, beep beep beep” Moving high low/fast slow as if in a car
Stomping Dinosaurs	Growing Up with Music (Sigmund)	C aeolian	usual duple	Acting out different movements rather than stomping, flowing around the room
Ni Nah Noh / Snowflake	Music Play (Valerio/Gordon)	D aeolian -----	usual triple/ usual duple	Duple rhythm patterns, play sleeping, snoring on So-Do/ pulsating movement upon “waking up”
In the Tub	Music Play (Johnson/Valerio)	-----	unusual unpaired	Movement within self space and shared space, “scrubbing” yourself (head/arms/legs/feet/hands) and scrubbing a neighbor
A Walking	Growing Up with Music (Sigmund)	-----	duple swing	Acting out different movements rather than walking, flowing around the room
Down by the Station	Music Play (Traditional)	D major	usual duple	Major tonal patterns, bilateral movement
Go and Stop	Music Play (Traditional)	-----	usual duple	Moving around the room in self space, using other activities like flying/swimming then stopping in a close self space
Hickety Pickety Bumble Bee	Music Play (Traditional)	-----	usual triple	Triple rhythm patterns, movement when the bee “lands” on a different body part (head, finger, hand, arm, elbow, leg, knee, etc.)
Bubblegum	Jump Right In (Schulte)	D major/A mixolydian	Usual triple/ duple	Pretending to have a bubble, chewing bubble gum, bubble gets bigger (exhaling air to emulate blowing a bubble, restricted movement) and then “pops,” So-Do pattern when “wiping off nose”
Hey Goodbye	Musicianship (Bolton)	mixolydian	usual duple	Pulsating flow **No use of names since one class will not have words**