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## A Survey of Music Therapists' Use of Music to Facilitate Reading Development in Children

Cynthia Cross

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A SURVEY OF MUSIC THERAPISTS' USE OF MUSIC TO FACILITATE READING  
DEVELOPMENT IN CHILDREN

by

Cynthia M. Cross

A Thesis submitted to the Graduate College  
in partial fulfillment of the requirements  
for the degree of Master of Music  
School of Music  
Western Michigan University  
December 2014

Thesis Committee:

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# A SURVEY OF MUSIC THERAPISTS' USE OF MUSIC TO FACILITATE READING DEVELOPMENT IN CHILDREN

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Western Michigan University, 2014

This study utilized Naturalistic Inquiry methods to investigate how music therapists use music elements to impact reading development in school-aged children. Eleven Board-Certified Music Therapists were interviewed providing information regarding music therapy interventions, reading skills targeted, theoretical influences, and professional influences. Transcripts of interviews were analyzed to determine themes, common use of language related to the subject, common perceptions, and techniques and uses for music to impact reading development. In general subjects did not report specifically using music elements to target reading behavior. Rather, most subjects identified reading objectives determined by classroom teachers and developed music interventions to accommodate those objectives. Future qualitative research could be an important method to gain a more in-depth look at the use of music for reading and other academic skills.

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Cynthia M. Cross

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## CHAPTER I

### INTRODUCTION

#### **Problem Statement**

The discussion of the optimal approach to teaching reading to children is varied and often controversial. Methods and programs commonly cited to teach reading successfully include phonics based instruction (Ehri, Nunes, Stahl, & Willows, 2001), whole language instruction (Jeynes & Littell, 2000) and comprehension instruction (Zipke, Ehri, & Cairns, 2009). Music has also been studied as an alternative or supportive medium for reading development (Wulfson, 1970; Zinar, 1976; Register, Darrow, Standley, & Swedberg 2007). Similarities in the characteristics of music that relate to learning to read include reading phrases, reading/writing left to right, rhythmic eye movement, vocabulary enrichment, learning articulation, and attention to detail (Diamantes, Young, & McBee, 2002). Few unifying techniques for using music to teach reading are found in current literature. Studies tend to focus on the results of entire music interventions rather than identifying which specific music elements are most associated with each specific reading and learning behavior (Register, Darrow, Standley, & Swedberg, 2007; Steele, 2005; Register, 2001). Some of these music interventions, identified by Palmieri (2008) include: using books based on songs, creating songbooks, use of sequence songs, rhythmic chant of text, and use of nursery rhymes. In order to further examine the use of music and its application to learning to read, it is important to understand how music therapists in school settings are incorporating the elements of music to teach reading. Specifically, it is important to understand music therapists'

perceptions of music as an effective approach for teaching reading; the theoretical framework music therapists employ when targeting reading skills; and what correlation, if any, exists between music therapists' ideas about using music to teach reading and actual interventions applied by music therapists.

### **Rationale for Research**

Across the nation, many music therapists serve school-aged children in private practice as well as in school settings. According to the 2012 American Music Therapist Association Survey & Workforce Analysis, 270 music therapists work in the areas of early childhood and school-aged populations. Available clinical research for the utilization of music as a validated approach to impact reading development is inconclusive and limited. Music therapists desiring to facilitate reading development in the course of their work have several options. They can access available literature and attempt to replicate techniques that are reported, can collaborate with colleagues to develop new interventions, and can utilize their own current understanding and experience of effective interventions. This project attempts to examine which music and music-based techniques music therapists are using to impact reading development, what specific aspects of development are targeted by music therapists in this area, how progress is evaluated by music therapists, and what theoretical frameworks are being applied by music therapists working with school-aged children. Discovering the existing framework for the use of music to facilitate reading development could provide for the development of mechanistically sound and theory-driven techniques.

### **Research Questions**

1. Do Music Therapists utilize specific music elements to target reading behavior?

- a. What types of interventions do Music Therapists tend to use when targeting reading behavior?
  - b. What specific music elements do Music Therapists tend to utilize?
2. What aspects of reading behavior do music therapists tend to target?
  3. Do certain combinations of music elements and reading behaviors seem to occur more frequently?
  4. How do Music Therapists evaluate the effectiveness of Music Therapy as an intervention for reading development?
  5. Do Music Therapists' perceptions about the effectiveness of MT as an intervention for reading development reflect the evidence found in the related literature?

### **Definitions**

Rhythm: That aspect of music concerned with the organization of time. As such it is a function primarily of the durations of the sounds and silences of which music consists. According to Thaut (2008) rhythm "refers to explicit divisions of time or space into intervallic time systems, recurrent and often (but not always) characterized by periodicity" (p. 4).

Melody: A succession of single pitches perceived as such...implies an orderly succession that establishes some key and leads to a clearly recognizable conclusion in that key.

Timbre: The quality given to a sound by its overtones...the quality of tone distinctive of a particular singing voice or musical instrument.

Pitch: The perceived highness or lowness of a sound. It is a function primarily of frequency, though at some extremes of frequency, intensity may also affect the perception of pitch.

Meter: The pattern of fixed temporal units, called beats, by which the timespan of a piece of music or a section thereof is measured.

The research and practice related to music therapy and reading development does not appear to be consistently or broadly applied. Often this literature takes the approach of designing music interventions to teach reading activities but does not focus on either specific music elements or specific reading skills. Interventions often include the facilitation of visual tracking, reading, and reading behavior rather than the direct impact of music elements on reading skills. The field of music therapy could benefit from a systematic understanding of how music therapists are approaching this issue.

Understanding what types of interventions are being utilized, what elements of both music and reading are being targeted, how music therapists choose to apply interventions, and what theoretical framework is supporting their work can assist professionals to further develop the practice of music therapy to impact reading development.

## CHAPTER II

### LITERATURE REVIEW

The Rational-Scientific Mediating Model (R-SMM) (Thaut, 2008) is one framework that therapists use to both understand and explain the validity of music as therapy. This model helps create a functioning theory of practice that provides evidence for music as therapy, guides assessment of areas of need, and structures the development of Therapeutic Music Interventions (TMI). The R-SMM contains four steps. Step one looks at basic music responses and how music affects the brain and/or behavior. Step two examines parallel responses in non-musical behavior. The identification of neuroanatomical, neurophysiological, and behavioral processes in musical and related non-musical functioning leads us to the third step of the model. This step looks at how musical behavior and responses are linked to functional behavior outside of music. It is important for researchers and therapists to understand the necessity of this step. If the link between music and behavior is weak or doesn't exist than further study should be focused elsewhere. This is important to the evidence-based platform of the R-SMM process. The final step in the model is clinical research. This is where researchers study a particular non-music response to a musical stimuli in a specific clinical population. This paper examines the literature related to music and reading development through the lens of the R-SMM, in order to provide a clear rationale for evidence-based research related to the topic.

### **Musical Model**

Many researchers have sought to uncover what is unique about select elements of music. Looking at isolated musical elements such as rhythm, melody, or timbre can give a more discrete and mechanistic picture of how music impacts human behavior and functioning. If one can understand how specific elements in music affect specific behavioral outcomes, more effective treatment strategies may be applied to specific learning or development situations. Rhythm is one element of music that has been studied extensively. Thaut (2008) refers to rhythm as “the core element that binds simultaneity and sequentiality of sound patterns into structural organizational forms underlying what we consider musical language” (p.4). In an article describing some of the functions of rhythm in the brain, Thaut (2003) details the response of the brain and body to synchronize or entrain to rhythmic stimulus. He reports that multiple neural networks become involved and activated depending on the musical and rhythmical stimulus. Importantly, rhythm seems to be an integral part of motivating and assisting motor activity when applied expertly toward that purpose.

Another take on rhythm is provided by Bispham (2006) who describes musical rhythmic behavior or MRB as “a constellation of concurrently operating, hierarchically organized, sub skills including general timing abilities, smooth and ballistic movement, the perception of pulse, a coupling of action and perception, and error correction mechanisms” (p. 125). His article, which is an evolutionary look at rhythmic function, establishes the motor connection to rhythm and pulse, supports music and rhythm as an “adaptive trait,” and concludes that certain aspects of music, most notably pulse and period correction, are “unique to humans and to the context of music and can thus be

supposed to have evolved specifically for music” (p. 131). Krumhansl (2000) also elaborates on a strong motoric component to rhythm perception. She further analyzes the psychological component of rhythm and establishes three primary domains affected by rhythm: cognitive, motoric, and affective. In this same empirical article, Krumhansl examines a similar psychological effect for pitch. An interesting highlight that may be relevant to the use of pitch to influence reading development is the influence of melodic (or pitch) organization on memory. Her research indicates that memory for longer pitch sequences is directly affected by the structure of the melody, most notably that melodies using traditional tonalities were more easily remembered. Some of the concluding ideas generated in this paper include the importance of the varying complexity of both music and response to music and the concept of an underlying pulse as foundational to music perception. A point of summary might be that the complexity of music (hierarchies of both rhythmic complexity and melodic complexity) drives both the physical and psychological response to music. In music these hierarchies organize or group musical ideas in rhythmic, melodic, and harmonic sets, thus rendering an overall organization within the music that can be familiar to the listener. Here pitch and rhythm work in tandem to provide organization, familiarity and assist recall. Warren and Griffiths (2003) discovered differences in brain activation for pitch versus spatial sequences. The 12 subjects in this study submitted to functional magnetic resonance imaging (fMRI) testing and were measured when identifying pitch changes, spatial changes, and concurrent changes. Results support activation of different regions of the brain based on the complexity of melodic properties presented.

Another study by Meyer, Steinhauer, Alter, Friederici, and von Cramon (2004) found variations in brain activity when pitch variations were presented in conversational sentences. The study was conducted in German and involved 14 subjects. Each subject was measured using Magnetic Resonance Imaging (MRI) and was asked to compare the prosody of sentences presented in three variations. Flattened speech was defined as “speech...with a violation of the sentence prosody” (p. 279), degraded speech was defined as “speech signal which lacks lexical and syntactic information” (p. 279), and normal speech was spoken in regular speech with changing emphasis on specific words. Variations in brain response were reflected in the MRI data for all combinations of conditions. Stronger functional activity was found in the left and right posterior superior temporal region for degraded speech than for normal speech. Large portions of the right posterior superior temporal gyrus (STG) showed stronger activity for flattened speech compared to normal speech. Flattened speech also showed more activation than degraded speech in the left pars triangularis (IFG) while the basal ganglia showed more activity related to degraded speech. Finally, rehearsing intonation activated only the left hemisphere while rehearsing flattened speech did not produce any significant activation.

Another music element, timbre, warrants examination as well. Samson (2003) reviewed various studies looking at brain response to timbre including studies looking at normal functioning subjects, subjects with brain damage, and other studies utilizing neuroimaging techniques. His review points primarily to right hemisphere involvement when the musical element tested for is timbre. This proved true for both normal functioning brain study and damaged brain study. An interesting finding related to the perception and possible use of timbre was that temporal cues were more easily identified

in melodic passages as opposed to single pitches, supporting that the elements that make up the musical context are important to the perception of timbre. While comparing brain-imaging studies related to timbre was difficult due to vastly different purposes for said studies, results generally showed a right-side brain preference when processing tasks related to timbre.

Another study on timbre by Menon et al. (2002) used 10 subjects and compared brain response to two conditions (melodies with a fast attack and melodies with a slow attack). For this study, digital sounds were created based on “linear attack time (AT), sustain time (ST) and exponential decay time (DT).” Timbre A had respective values of 15, 60 and 198 while timbre B values were 80, 0, and 117. The primary focus of the study was on the attack time with the other values adjusted in order to provide similar perception between the two conditions. Their results, acquired via fMRI testing, indicated that timbre is processed in both the right and left hemispheres. In addition, melodies with the slower attack speed resulted in significantly greater activation responses. The authors speculate that the melodies with the more significant response allowed for a greater auditory response and included harmonics within a comfortable hearing threshold. The authors recommended further study and exploration of timbre and the response it creates in the brain.

### **Non-Musical Model**

The discussion of the optimum approach to teaching reading to children is varied and often controversial. While there are many methods and programs available, three common focuses emerge: phonics based instruction, whole language instruction, and comprehension instruction. Some researchers support use of one primary system, with

other approaches seen as supplementary. Ehri, Nunes, Stahl, and Willows (2001) used the National Reading Panel's Meta-Analysis evaluating systematic phonics and found support for the conclusion that "systematic phonics instruction helps children learn to read more effectively than non-systematic or no phonics instruction" (p. 394).

Requirements for inclusion in the meta-analysis included focus on phonics instruction rather than phonemic awareness, experimental research that used phonics instruction and a non-phonics control, school-based rather than laboratory-based approaches, and studies found in professional journals. Once the criteria were applied, 38 articles were included in analysis. It is important to note that the authors defined reading to include "reading real words and pseudo-words, reading text orally and text comprehension" (p.395). Effect size became the primary measurement by which the authors determined effectiveness of the phonics intervention. Their conclusions regarding the effectiveness of phonics instruction was substantiated by discovering that a majority of the studies reported positive effect sizes.

An earlier meta-analysis by Jeynes and Littell (2000) categorized different whole language instructional categories and found that studies using "pure whole language" as defined by their criteria, seemed to indicate that whole language instruction would be preferable to more basal approaches, especially with low-SES students. These authors characterize whole language as follows:

1. Whole pieces of literature and functional language as opposed to abridgments, adaptations, or segmented texts;
2. Individual students' choice as opposed to teacher-sponsored, whole class assignments;
- and 3. Integrated language experiences as opposed to direct instruction in isolated skill sequences. (p. 23)

Fourteen studies make up this meta-analysis with a focus on students in kindergarten through third grade. One of the difficulties found in examination of whole language approaches was in defining clearly what made a reading approach ‘whole language’ in nature. While the authors found that interventions that were strictly allowed to emerge as whole language (no basal elements, completely individualized assignments, and no teaching of skills in isolation) were significantly helpful to students, these were only two of the 14 studies. In addition, when other factors were present, basal instruction (such as phonics instruction) proved more effective for the students in question. Another part of the concern falls to the type of testing involved. Although whole language instruction is perceived to create better responses to non-standardized testing, standardized testing is the norm in most school settings.

Most studies, however, seemed to ultimately favor a balanced approach to teaching reading, usually with an emphasis on a particular method. Zipke, Ehri, and Cairns (2009) examined the results of teaching semantic ambiguity to third graders, particularly how that instruction affected reading comprehension. This study used a pre/post test design and included 46 third grade subjects. Here students in the experimental condition were trained individually, being pulled from their regular classroom for a 45-minute session once a week for four weeks. Concepts included in the training were multiple word meanings, multiple sentence meanings, riddles, and text reading. Students in the control group also met individually outside their regular classroom. Control subjects spent a shorter amount of time (15-20 minutes) and completed reading and discussion tasks, both as individuals and in small groups. Their study found that focusing on a specific metalinguistic awareness skill beyond phonics, in

this case “processing multiple meanings and detecting ambiguities” (p. 317) had a positive effect on students’ ability to “explain double meanings of ambiguous sentences” (p. 309). In addition this instruction appeared to transfer to other skills not directly taught in the experimental conditions. It seems that this type of instruction may combine the best of a strictly phonics-based instruction and a pure whole language instruction, giving students greater options and flexibility.

### **Mediating Model**

A number of researchers have studied the relationship between music and academic skills. Anvari, Trainor, Woodside, and Levy (2002) found some relation between reading development and phonological awareness in kindergarten children. The authors believe music is a means to practice and develop auditory perception, which in turn can positively impact early reading development. This study looked at 100 children (50 four year olds and 50 five year olds) from various schools and daycares in Canada. In the course of five sessions, the children were individually tested on both standardized and author-developed measures. The authors found that some children’s higher music perception or music ability could be related to higher reading skill at a beginning level. They also looked at the similarities between the development of speech and music skill, finding a possible connection that might affect a child’s ability to learn to read. It appears, based on this study, that similar mechanisms are engaged in the realm of auditory processing in reference to music perception and phonological awareness. Ultimately the authors discovered that “music perception skill is reliably related to phonological awareness and early reading development” (p. 126), in addition to predicting reading skill. The focus with this study was on the very beginning reading

skills. This does show encouraging results that music may impact the initial stages of reading development in a positive fashion.

In a somewhat related study, Gromko (2005) looked at how beginning readers might be affected by early music instruction. This study used kindergarten students (n = 103) as subjects. Four classes in one school served as experimental groups and four classes in a second school served as controls. Students in the experimental groups received 30 minutes of music instruction a week while children in the control groups received no music instruction. Music instruction included the learning of folk songs and incorporated movement, body percussion, use of instruments, and use of symbolic notation. Gromko found many examples of the benefits of music instruction to skill development. Specifically, the treatment group scored significantly higher mean scores for phoneme-segmentation fluency. She also found that the way music was learned, particularly spatially and with a “sound to symbol” approach, could explain the correlation between learning and music. In this case, the use of music elements may have been influential in the ability of students to learn phonemes, assuming that a strong rhythmic component existed to incorporate movement and body percussion into the music lessons. Additionally, as in the Anvari research, auditory perception appeared to influence the positive results.

Literature linking music and reading skills seems as varied as the approaches themselves. Butzlaff (2000) completed a literature review examining the association between instruction in music and performance in reading. Based on 6 experimental and 25 correlational studies Butzlaff reported a strong connection between musical experience and reading ability, although causal factors remained undetermined. The six

experimental studies yielded no significant results. While causal relationships between music and reading development were not explicitly defined, Butzlaff did suggest some relationship between music instruction and reading performance. He also noted that the scope of his study would definitely not explain why music worked, only that a possibility exists that it may. Several non-experimental articles have been published on this subject, primarily in journals geared toward music educators. An article by Hansen and Bernstorff (2002), written to encourage continuation of funding for music education programs, describes the instruction of music as a “rich source of support for achieving reading literacy.” The authors list several reading skills that are supported by music development including: decoding skills, phonological awareness, phonemic awareness, sight identification, orthographic awareness, and fluency. In this article musical components are compared with reading components across a variety of reading skill areas. Some music elements listed here include: pitch matching for phonological awareness phrasing for phonemic awareness, and identification of rhythm symbols for sight identification. Comparing the similarities between text reading and music reading may be a good starting point for developing more specific interventions between reading and music concepts. Another article by Collett (1991) describes a specific program designed to combine reading and the arts. While evidence stated in this article is anecdotal, experiences with music were evaluated by participants to have a positive impact on learning for students. This program focused specifically on integrating music experiences in a multi-sensory approach. Students were encouraged to listen to music, write about their perceptions of the music, incorporate movement and props within the story of the music, and discuss characters as depicted in music. This author concludes that the music

project, which created collaborative opportunities for music and classroom teachers, positively impacted “the child’s appreciation for the arts...the child’s ability to learn, desire to learn, and self-esteem.” A more recent study by Tsang and Conrad (2011) seeking to examine the relationship between music training and reading readiness found a correlation between pitch perception and reading readiness for children without music training. These authors looked specifically at students who received music lessons as opposed to students who did not receive music lessons. Subjects (n=70) were tested on reading and cognitive skills (verbal intelligence, word identification, and phonological skill) as well as music perception skills (melody, rhythm, and timbre). Again with this study, conclusions warrant further investigation of causal factors when observing music and reading development.

Specific to music and phonological processing is a study by Forgeard, Schlaug, Norton, Rosam, and Ivengar (2008). The authors looked at the relation between music and phonological skills in both normal-reading children and students with dyslexia. The first study separated an experimental group of 32 (children with instrumental music training) and a control group of 12 (children without instrumental music training), measuring scores at baseline and 31 months. The authors hypothesized that students in the experimental group would experience greater improvement in phonological skills and that baseline scores and follow up scores would be significantly correlated. Results confirmed the hypotheses; a relationship was found between pitch processing and phonological skills and the relationship was stronger in children who had received music training. A second study looked at a smaller group of students (n = 10) at baseline and 14 months, measured by the Woodcock Language Proficiency Battery. Results showed a

strong connection between auditory music skills and reading abilities, again with stronger results for the group of students with previous music training. A third study using students diagnosed with dyslexia ( $n = 31$ ) showed that music discrimination skills predicted phonemic awareness which in turn predicted reading skills, however reading skills were not directly or significantly predicted by music discrimination skills. A final study compared 5 dyslexic students and 10 normal-reading students (divided into a control and a music group). Both normal-reading groups scored significantly higher than the dyslexic group, and students with previous musical training out-performed the control group. Results of the composite of these studies could suggest that musical training could benefit students in the development of language-related skills and that specific music intervention could assist in remediating some of the problems in dyslexia.

Integrating the music education curriculum into a whole language classroom was the goal of a project described in a paper by Miller (1994). This qualitative study utilized a first grade classroom that embraced whole language instruction and evaluated the use of an integrated general music lesson. The author collaborated with the classroom teacher to provide a weekly music lesson that addressed basic music education goals in conjunction with classroom topics and curriculum. Though largely anecdotal, results of this experimental approach yielded improvements in student engagement both in music and classroom curriculum, improvements in colleague collaboration and communication, and a need for further investigation into the impact of curricular collaboration between music and general education.

### **Clinical Model**

Standley and Hughes (1997) conducted a study to evaluate a music curriculum specifically designed to effect pre reading and writing skills. The participants in their study were 24 children ages, 4-5 years, who were enrolled in an early intervention program. Experimental subjects received the specialized curriculum in two 30-minute sessions for a total of 15 sessions. The control group received no music. Both groups were pre-tested, retested at the end of the first semester of school, and again at the end of the second semester. The specialized music curriculum utilized a variety of techniques and intervention elements including embedded instructions, music to cue responses, tasks for visual awareness and directionality, and focus on letter sounds. At the beginning of the second semester the control and experimental groups were switched, allowing the original control group to experience the music curriculum as well. Results indicated that the specialized curriculum had a positive effect on the subjects' prewriting skills as well as recognition of print concepts.

Register (2001) replicated the Standley and Hughes study with a larger sample (n = 50) and for an extended period of time (60 versus 15 sessions). Register's study included developmental music therapy groups for the control subjects. Her research also found a significant enhancement in subjects' abilities to learn targeted skills. A later study by Register, Darrow, Standley, and Swedberg (2007) looked at a specifically designed music and reading curriculum targeting second grade students. This experiment involved two second-grade classrooms for a total of 33 subjects (16 control and 17 experimental). Of these second graders, nine students had specific reading disabilities and all nine were included in the treatment condition. Treatment groups were provided 3

times a week for 4 weeks totaling twelve sessions. Targeted areas of reading function were word knowledge, word decoding and reading comprehension. Treatment sessions were crafted with a balance of sensory, music listening, active music making, and recorded music. The control group maintained their normal reading curriculum and all students completed pre/post test measurements. Learning disabled students experienced significant improvement from pre to post test measurement. Among the other students, both groups showed significant improvements in measurements of word decoding and knowledge. Students also showed improvement in scores of comprehension but not at a significant level. It seems that the emphasis of these three studies falls to the specific design of the music activities and the impact that specialized instruction has on the development of the target skills. In relation to specific music and/or reading elements however, more information is still needed. Hetland (2000) explored the connection between making music and enhanced spatial reasoning, reviewing 15 studies collected with the following criteria:

- experiments reported in English that included a condition in which participant were taught to make music
- one or more control conditions in which participant did not receive instruction in actively making music
- an outcome measure of performance on one or more spatial tasks that required mental rotation and/or spatial visualization
- provide statistics necessary to compute an effect size. (p. 185)

Results of her review indicated that spatial-temporal performance did appear to be enhanced during music instruction and this benefit was maintained up through at least two years of instruction. Music instruction here included keyboard instruction as well as general music instruction and was conducted both individually and in groups, with all types of instruction providing benefit.

Atterbury (1985) examined differences in musical processing ability between normal-achieving and learning disabled readers by reporting on three projects conducted over a three-year period of time. The first project, conducted with students ages 7 and 8, indicated that normal-achieving readers performed better on all tasks when compared with learning disabled readers. The second project, conducted with 9 year olds, found significant differences in rhythmic tasks between both groups. The third project, which used subjects ages 7,8, and 9, found that normal-achieving readers had better tonal discrimination than their learning disabled peers. Data also indicated that 9-year-old subjects had better tonal discrimination than their younger peers. Overall this study found that all subjects responded significantly better to tapped and spoken rhythm patterns.

Moreno, Friesen, and Bialystok (2011) found that short-term (20 days) music training translated into a larger margin of improvement in rhyme awareness and mapping unfamiliar words to symbols than art training. Their study included 60 children, ages 4 and 6, participating in a summer camp experience. Subjects participated in either music or art training for 2 hours a day for the 20-day camp. The author designed two training programs, one in music listening and one in visual art. Teachers also evaluated subjects at the end of the treatment period on skills taught during the training.

In summary, each unique approach to teaching reading has strong support. Based on the extant literature it is likely that music has the potential to positively impact reading development, from assisting in phonics instruction to supporting a whole language classroom. While music-based research has focused on the application of music interventions developed to impact reading, there is a need for exploration into the specific mechanisms of music elements associated with learning. In addition, an understanding of

the mindset of music therapists currently seeking to explore reading development from a musical perspective bears exploration.

Looking at the relevant literature through the R-SMM model reveals both an interest in evaluating the use of music to enhance reading development and a need to further clarify how music interventions are currently being developed and implemented to impact the important skills required for reading. This study will explore the perspectives of music therapists currently addressing reading skills in their practices, in order to further define what is happening in the music therapy profession today to support reading development through music therapy interventions.

### **Background and Development of Methods**

This study was initially conceptualized as a survey. Upon completing the literature review and applying the RSMM model to the material however, it became apparent that a more exploratory approach might be necessary to obtain the most comprehensive information available on the topic. It was theorized that music therapists working with reading in their practice would utilize individual music elements on a regular basis when creating therapeutic music experiences. What could not be assumed, due to a lack of specific writings on the subject, was whether therapists would use common language and definitions to discuss their clinical work in this area. Therefore it became necessary to take a different approach to collecting data that would allow the researcher to establish common ground with subjects, define terms if necessary, and consider the trends found among therapists currently working with this phenomenon. In completing the literature review it was discovered that substantial material had been written to describe tasks involving music and reading but little has been written to

describe the interaction or involvement of specific musical elements in the process. The interviews in this study were undertaken to provide a snapshot of terminology, current practice, and philosophy of music therapy practice as it applies to reading development. Interviews were conducted without preparation of subjects or expectations on the part of interviewer or interviewee, thus allowing for unrehearsed answers. Frequently during the interview process subjects questioned the validity or appropriateness of their answers, often seeking reassurance from the interviewer that they were answering as expected. If this study had been undertaken in a strict survey form there would have been no means to clarify questions or reassure subjects who hesitated to answer and subjects may have chosen answers that did not accurately describe the true functioning of their current practice. The results contained in the present study are believed to describe the current use of music therapy interventions to influence reading behavior by this sample.

To this end the results are presented as follows: questions are categorized as “research questions” and “interview questions.” In the findings section, an explanation of original research questions and related interview questions are provided sequentially. Where an interview question does not relate directly to an original research question, the value of the additional information provided is explained. Interview content is first summarized per each question to give the reader an overview of subject responses. In the results section the data is discussed in relation to themes and impressions.

## CHAPTER III

### METHOD

Participants were 11 board-certified music therapists currently working with early childhood and school-aged populations and who seek to remediate reading deficits as part of their regular interventions. Participants were located through the AMTA membership directory and two closed Facebook groups dedicated to music therapists in which the researcher was a member. Participants were all female and ranged in age from 22-65 years. In compliance with inclusion criteria all subjects were Board Certified Music Therapists with at least a Bachelor's degree in music therapy who worked with school age children and currently target reading skills in their practice. One subject held a Master's degree in Music Therapy and one subject was in the process of completing her Master's degree in Music Therapy. Five subjects had obtained Master's degrees in other fields. These degrees included Business, Adult Education, Special Education, and Education. One subject stated she had obtained a Master's degree but "not in music therapy" and one participant was currently pursuing a PhD in Psychology. All participants worked directly for schools or were in a private practice that served schools and school-aged children. AMTA regions represented included the Great Lakes Region, Southeastern Region, Southwestern Region, Midwestern Region, and the Western Region. Upon receiving approval from the author's thesis committee and Western Michigan University's Human Subjects Institutional Review Board (HSIRB), an initial invitation was sent via e-mail to 143 therapists (See Appendix B). The scope and purpose of the study was explained and correspondents were asked to respond to the email if they

were interested in being interviewed for the project. Initially the project intended to select the first ten affirmative responses. However, during the interview process, the recorded data for one subject was corrupted and was unable to be transcribed with any assurance of accuracy. At that time the next willing participant was contacted and agreed to be the eleventh subject. Once subjects had signed and returned the consent form for the study (see Appendix C), an interview was scheduled. The researcher-designed script, found in Appendix A, was designed to discover what current Music Therapists believe about the use of music to impact reading development, how they use music in this fashion, and from what foundation are these music interventions developed. The interview format allowed participants to ask questions of the researcher and clarify terms and definitions. It is important to note that questions were asked in an organic manner, meaning that if the conversation progressed naturally without asking a specific question, it was allowed to do so. This enabled the interview to be conducted conversationally without requiring the interviewer to redirect or back track when subjects included information that addressed multiple questions in the same response. Interviews were conducted via telephone and recorded using the TapeACall application purchased for use on the interviewer's iPhone 5S. Transcriptions of all interviews were used as data for the study. Transcripts can be found in appendices D through N and interviewer comments are printed in bolded font while subject responses are printed in regular font. Transcripts have been edited to preserve anonymity where responses might contain information that would identify the subject. With the influence of Naturalistic Inquiry and other areas of qualitative methodology, transcripts were analyzed to determine themes, common use of language

related to the subject, common perceptions, and techniques and uses for music to impact reading development. A summary of subject answers can be found in appendix O.

CHAPTER IV  
ANALYSIS AND DISCUSSION

**Findings**

The first three research questions address the use of music elements, reading components, and implementation of those in combination. The first question addresses the primary issue of using music elements to target reading behavior and asks for specifics as to types of interventions and specific elements of music. The second question inquires about the specific reading behavior targeted by music therapists. Research question three then follows up this line of thinking by asking about characteristics of the occurrence of specific combinations of music and reading if any.

**Research Questions 1, 2, and 3**

1. *Do Music Therapists utilize specific music elements to target reading behavior?*
  - a. *What types of interventions do Music Therapist tend to use when targeting reading behavior?*
  - b. *What specific music elements do Music therapists tend to utilize?*
2. *What aspects of reading behavior do music therapists tend to target?*
3. *Do certain combinations of music elements and reading behaviors seem to occur more frequently?*

**Interview Question 1**

*What types of music interventions do you typically use to impact reading skills?*

Every subject mentioned the use of books of songs as one of their primary interventions used for reading. These were referred to as “singing books,” “song books,”

“books to song,” and “singable books.” One subject did not refer to books specifically but discussed her use of familiar hello and good-bye songs with printed words on a chart. Four subjects reported writing original songs to be used in interventions and two subjects indicated that using books with songs that were already composed allowed classrooms and families to utilize the resources more easily.

Other responses regarding music interventions were varied across participants. Interventions used by multiple subjects included labeling instruments, song writing by students, and fill in the blank songs. Interventions mentioned by only one subject included tone chimes with words divided according to chords, rhythmic books, dancing to letter songs, lyric analysis, nursery rhymes, and sequencing of songs. Several subjects also discussed the use of visual props when using music interventions, usually in conjunction with singing books.

### **Interview Question 2**

*What components of reading do you typically target?*

Pre-reading skills such as letter recognition, beginning phonics, left to right tracking, letter sounds, rhyming words and 1:1 correspondence were the most common reading tasks addressed by music therapists in this study. Subjects did frequently clarify that they were working with students who were cognitively unable to manage the more complicated levels of reading. It was left to the subject to define reading components for themselves. Subjects also described working with some simple comprehension, word identification, and spelling skills. Other reading components identified by individual subjects include: synonyms, antonyms, pre-braille, writing, tracking shapes, print familiarity, syllables, sequencing, inferencing, and blending.

### **Interview Questions 3 and 4**

*Do you use specific music elements to address specific reading outcomes? Can you tell me why or how you use that element most often in interventions?*

Rhythm was the most commonly mentioned music element among subjects. Rhythm was referred to as “repetitive rhythms,” “rhythmic,” “repeated rhythm for sound production,” “rhythm,” and a “strong rhythmic input” by various subjects. Rhythm was seen by subjects to provide structure, organization, and a kind of musical prompting for clients engaged in reading exercises. Subjects discussed playing music with a strong rhythmic beat, playing words and syllables on instruments, and using repeated rhythms to emphasize concepts.

Most other music elements were mentioned only once by subjects. These include: lyrical sentences, popular songs, tension/resolution, melody, tempo, articulation, pitch, dynamics, shape, and inflection. As with reading components, subjects self-defined musical elements. Examples typically given by the interviewer were rhythm, lyrics, and form. The interviewer often prompted this discussion by stating personal interest in music elements from the Neurologic Music Therapy perspective. The music elements themselves did not seem to be the primary impetus in use during the music interventions. Subjects often asked for clarification as to which music elements were appropriate for their answers and one subject stated she only used music after the written word was introduced, specifically not designing interventions with specific music elements in mind. Most subjects did describe being mindful of using some music elements as they designed and implemented music therapy with their clients, especially in the area of rhythm and more often when working on pre-reading or beginning reading skills. There did not seem

to be any consistent combination of music elements used to impact reading behavior used more frequently or by more therapists. It would seem that use of music interventions for these subjects was highly individualized based on personal preference, experience, and current employment situation rather than information gleaned from the extant literature.

Research question four sought to understand how therapists ascertained whether their use of music to impact reading was effective.

#### **Research Question 4**

*How do Music Therapists evaluate the effectiveness of Music Therapy as an intervention for reading development?*

#### **Interview Question 5**

*How do you evaluate the efficacy of your music interventions designed to impact reading?*

Two primary methods of evaluation emerged from subject interviews. Most participants reported doing regular informal and observational assessment both during music interventions and through classroom interaction outside of music therapy. Subjects reported taking note of interventions that seemed to motivate clients and repeating those tasks, counting them as successful by the level of engagement of the student. Some subjects also discussed getting feedback from teachers and parents and using those observations to determine which interventions to continue and which ones to discharge. This seemed to be the most common means therapists used to evaluate their work in this area. Therapists seemed to put a high value on using this method, especially when collaborating with classroom teachers. It seemed to encourage cooperation and conversation between the therapist and other interested parties, providing a means of

evaluation regardless of whether the therapist was required by their employer to collect data or not. It also might allow consistent interaction with teachers and co-therapists, which may have provided a sense of collaboration and professional belonging.

If therapists did report collecting data they usually counted trials of some sort. These types of evaluation were described as “counting successful trials,” “counting number of prompts,” and “counting correct responses.” Some subjects mentioned taking data on goals that were written in a student’s Individualized Educational Plan (IEP) but none of these subjects wrote unique music therapy goals that were published on an IEP. If subjects discussed the use of IEP’s related to goals they also reported a desire to have more specific input into the process but were unable to do so.

One subject did report allowing students to do self-evaluation utilizing recordings of music and reading interventions and asking the student to review the recording and report their own progress.

Interview questions 6-8 and 10 provided information beyond the scope of the original research questions. In true naturalistic inquiry form, which according to Lincoln and Guba (1985) is “virtually impossible to design in any definite way before the study is actually undertaken” (pg. 187), the actual interview questions evolved out of the need to address other issues that made sense in the context of the study, allowed for a natural flow to the interview process, and accounted for a broad enough picture of music therapy practice in the topic area to determine common themes.

### **Interview Questions 6, 7, and 8**

These questions are grouped for discussion purposes because they were not necessarily asked verbatim and/or in sequential order.

*Is there a predominant theoretical framework under which you apply music interventions to reading development? If yes, what model? In general, how often do you purposely engage in applying the above model when developing music interventions to impact reading development?*

It was notable that subjects who responded affirmatively without prompting or receiving examples were primarily subjects that identified themselves as working within a behavioral model. These subjects, three in number, quickly responded in the affirmative to the question and confirmed that they felt they used this theory most of the time when approaching therapy with their clients. These subjects also referred to their schooling as a major influence in this thinking. One subject clearly identified herself as having a “slant toward the humanistic and improvisational” and one therapist identified herself as “leaning toward behavioral” but most subjects did not identify readily with any particular theoretical way of thinking. When given further clarification on the question and prompted with examples such as behavioral, NMT, or holistic, subjects identified general theoretical areas of influence including: child-centered, improvisation, sight words, modeling, trial and error, and sensory. It may be that music therapists more readily identify the influence of one or more approaches to therapy rather than seek to embody only a particular theory in their practice.

Research question 5 sought information regarding music therapists’ use of research literature and the extent to which the body of research was reflected in their perceptions about their use of music to impact reading skills.

### **Research Question 5**

*Do Music Therapists' perceptions about the effectiveness of Music Therapy as an intervention for reading development reflect the evidence found in the related literature?*

### **Interview Question 9**

*How often do you apply findings from the extant research literature when developing music interventions to impact reading development?*

As with the question of theoretical influences, most subjects did not immerse themselves in current research regarding the topic of reading and music. In fact, seven subjects reported little active involvement in reading and utilizing current research. The most often mentioned hindrance to studying current research was lack of time. Three subjects did report regular and ongoing reading of academic journals and research. Two of these therapists were several years removed from formal education and were retired from full time employment. One subject reported going to the extant literature when faced with challenging situations that were work related. Only one subject reported frequently utilizing research regarding literacy and trying to stay current with both music and non-music research. Participants that were seeking advanced degrees or more recently graduated from university programs reported feeling as if the research material was still fresh enough that they didn't need to devote specific time to it. One subject did discuss attendance at conferences and meetings to inform and educate on techniques that were relevant and useful to her current employment.

### **Interview Question 10**

*Please briefly describe what has influenced you professionally to address reading skills in your music therapy practice.*

Nearly all subjects reported being primarily influenced by the work setting. Participants repeatedly mentioned following IEP goals, talking with classroom teachers, collaborating with other therapists working in the educational setting such as Speech and Language Pathologists, and the general academic focus of working with school-aged clients. Music therapy interventions as classroom and academic support seemed to be a primary theme for participants in this study. One subject reported becoming aware of a possible connection while competing work on a Master's degree. Other influences mentioned specifically were experience with the therapist's own children, parental input on goals and objectives, and availability of clinical resources.

### **Discussion**

This discussion includes the major themes extracted from interview transcripts, conclusions based on information obtained during interviews, and insight gained by the researcher from the interview experience. In addition, understanding gained from the process of naturalistic inquiry including potential for future research in both music therapy and education will be discussed.

#### **Use of Music Elements**

In regards to the use of and definition of music elements there seems to be only a general agreement among subjects. While eight participants identified "rhythm" as a frequently used music element, the description of the use of rhythm from participants generally did not reflect how rhythm was reported to be used in the literature cited in this study (Thaut 2003, Bispham 2006, Krumhansl 2000). While subjects consistently identified a perception of the importance of using rhythm they did not report any theoretical or evidence-based rationale for using rhythm. Examples were largely

anecdotal in nature and the frequency of the intervention often based on observation of the therapist and encouraged by input from colleagues. Interventions were determined to be successful likewise, often without any quantitative data to verify efficacy.

Interestingly, very few therapists interviewed seemed to specifically utilize music elements to target reading behavior. About half of the respondents initially mentioned reading components first in response to interview question 1 and then elaborated on the music tasks they chose to impact that academic behavior. In addition, response to the question of music elements was frequently hesitant and often subjects required clarification in order to form their answers. Questions emerging from this response include: is there understanding of individual music elements used in a therapeutic setting, are these elements in fact being used by therapists, and is there a need for a more cohesive definition of these elements? In fact, music therapists more consistently reported using “what works” based on interventions used and deemed successful by personal experience in the past. While music was always the medium used by these therapists, interventions were often created around the skill being addressed. When asked about use of specific music elements one subject reported “I’m really bringing in the written word after we have the music...so no I don’t start with or design it with that.” Most often therapists seemed to be presented with a problem, such as a need for a student to recognize beginning letters, and they developed interventions they determined would best allow the student to work on that problem.

Most subjects at some point defined their role in the academic arena as one that supports school, classroom, or parental goals. Subjects reported that their services were not included on IEP’s but rather they often referenced those IEP’s to determine a

direction for music therapy treatment. In addition most subjects identified the school setting as a primary influence in their decision to pursue reading development in their practice. In this way the focus on reading could be construed more as one of convenience and environment rather than completion of specific academic goals. Alternatively, subjects in this study consistently reported working with students who experience moderate to severe cognitive and/or neurological impairments. These students are often not working on the same level of reading skills that would be found in the typically developing student population and the evolution of interventions would naturally reflect that circumstance.

A more scientific approach might require a practitioner to view the student from the standpoint of determining the optimal state of arousal required in learning to read, followed by the application of music to attain that arousal status. This would allow presentation of music therapy as a primary vehicle for academic success rather than a secondary presence that supports goals established by other professions, however it does not seem that these school settings were amenable to such a use for music therapy.

### **Use of Songbooks**

While other music elements were mentioned across subjects it was interesting that all subjects identified songbooks or some variation of a songbook as an intervention used in practice. This researcher was somewhat surprised that music therapists consistently refer to the use of a single application, the songbook, but do not report more cohesiveness when discussing music elements in practice. Upon reflection of the interviews it again seems that environment and the expected role of the music therapist in the environment heavily influences this practice. It may be simply more practical in a

school setting to offer support to classroom teachers and other professionals who regularly craft IEP goals for students. The natural development of practice in that common situation then lends itself to the use of objects, such as songbooks, rather than the more unexpected scientific application of music elements, such as rhythm, to the development of reading skills.

### **Use of Visual Prompts**

One other consistent theme among subjects was the use of visual aides in interventions related to reading. Participants discussed using books, charts, worksheets, and song sheets to encourage left to right tracking, keep students engaged in tasks, and provide another layer of learning for students. Interestingly no one discussed the actual physical aspect of visual activity necessary for competence in reading skills. Based on information from interviews it would seem that there is plenty of anecdotal evidence to support the use of visual aides and the importance of a visual component when addressing reading skills.

### **Implications and Limitations**

Primary to this investigation was to determine what is actually being done to relate music and reading. As the field of Music Therapy becomes more focused on evidence-based practice, it is important that therapists develop and implement services based on rigorous clinical research. A good understanding of what is currently involved in the practice of music interventions to assess, impact, and assist reading development can be a helpful way to determine the focus for future experimental research. In addition, understanding the language therapists are using to describe the application of music to reading development is important along with proposing some common terms and

definitions for future discussion of the topic. Based on the current literature it seems apparent that there is merit to further exploration of the subject. This study can assist in pinpointing possible directions for future research.

Limitations of this study include factors related to the interview process, the experience of the interviewer, and use of materials in recording interviews. Additional experience or practice giving interviews would be beneficial to any professional seeking to complete this type of study. Initially when interviewing subjects I utilized the active listening techniques that are so prevalent and necessary to good therapy. Unfortunately, I quickly learned that my affirming vocal responses often covered up subject responses on the telephone recording. Another area a researcher should develop to improve the quality of an interview is to develop more reciprocity during the interview process. In this case, I took the initial response of each participant; only seeking clarification if a response was not understood. A further examination of subject responses, such as asking participants to define commonly used terms, would provide a greater depth of understanding especially when considering how therapists use and understand music elements. It would also have been helpful to conduct practice interviews, thus hopefully alleviating some of the aforementioned difficulties. In addition it is recommended that prospective participants be given a time frame for responding and setting up interviews. More practical considerations involved in the process concern the software and applications utilized in the recording process. In this case, two of the interviews did not record initially and one interview did not record properly the second time. An interviewer would benefit from taking detailed notes during the interview as well as designing a

process for backing up and obtaining interview information in the event that data is lost due to software malfunction or human error.

Another consideration arising from analyzing the interview transcripts is the influence of the interviewer's bias, especially when the need arose to give examples for clarification. For example, in interview question 3 asking about the use of specific music elements, I most often gave examples of rhythm, form, and lyrics. It would be beneficial to further mine the responses of subjects here to develop a more exhaustive list of music elements or simply allow the subjects to define the phrase "music elements" by their own experience and knowledge. The possibility exists that subjects were at least partially influenced by my suggestions when formulating their answers.

It was also interesting as an interviewer who works in a similar capacity to the subject pool, to consider how much of my own experience played a part in both the manner of asking questions and the interpretation of the data. In particular the issue of evidence-based practice was a primary area of interest for me. Initially it seemed that, as a profession, music therapy did not specifically engage in true evidence-based practice in this arena. The scientific data is limited, in these responses only a few subjects engaged in counting correct responses, and all other evaluation was on an informal, observational level. While there is certainly a valid possibility for future research of a scientific nature, I was most encouraged by considering the potential for qualitative research in this area. So often music therapy in the school setting is conducted as an ancillary and supportive service. In this respect, and in agreement with subject responses, the perception of colleagues, administrators, and parents largely determine the value of the service.

### **Future Research Recommendations**

There is much emphasis on evidence-based practice in music therapy and education. Music Therapists interviewed for this study relied more on anecdotal evidence when evaluating the efficacy of their music interventions focused on reading development. Participants in this study also reported using ‘what works,’ or deeming an intervention successful if it engages a student or assists a student in maintaining attention. Some subjects did take data on correct responses during interventions but this data collection does little to demonstrate any correlation between the music intervention and reading gains because there were no comparison between music and some other treatment condition. At first glance it would then appear, that outcomes attributed to music therapy, based on the responses of these eleven subjects, are not largely evidence-based practice as they relate to the development of reading skills in the school setting. It would seem, from the response of participants in this study, that music therapy in a school setting or with school-aged clients is valued by teachers, parents, and other therapeutic professionals. Several subjects reported working closely with classroom teachers, therapy staff, and parents to develop programming to benefit students. A predominant theme for therapists was utilization of music therapy as a support to teacher or classroom goals. Many therapists also reported considering reading goals because of being involved in the school setting. No participants reported a perception that their skills and services were not respected or valued in their work environment, rather they often reported being somewhat of a problem-solver, especially when faced with difficult or unique student needs. One subject reported special education teachers and other therapists asking her “would you just try introducing reading” or “would you reinforce what we are trying to

do in this setting.” She also reported working with reading specialists who asked “how would you as a music therapist introduce this concept to these kiddos that process this information quite differently?” Another subject reported that the biggest reason she began working on reading skills was “ questions from those co-workers.” A qualitative study of perceptions of therapists, teachers, parents, and students on the uses of music therapy in the school setting that examines the interactions between therapists and students, may yield data that suggest that music therapy is a supportive intervention toward academic goals. Qualitative methodologies may contribute an understanding of the nature of music therapy in the educational setting by immersion into the experience of music therapy. Data from such studies may reveal the perceptions of the value of music therapy experiences of the parent, student, teacher, and music therapist. An in-depth study examining perceptions of the stakeholders experiencing a variety of music interventions in the setting, and allowing therapists to fully examine and explain their process of intervention could yield important insights. With qualitative research music therapists may view their practices through lenses that provide information not attainable through experimental designs.

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Appendix A  
Interview Script

### Section 1 – demographics

Sex

Age

Region

Degrees/certifications

University

Current employment

### Section 2 – questions

1. What types of music interventions do you typically use to impact reading skills?
2. Do you utilize a particular musical element more frequently to impact reading development?
3. What elements of reading do you typically target?
4. How do you combine music and reading elements in your practice?
5. How do you evaluate the efficacy of your music interventions designed to impact reading?
6. Is there a predominant theoretical framework under which you apply music interventions to reading development?
7. If yes, what theory?
8. In general, how often do you purposively engage in applying the above theory when developing music interventions to impact reading development?
9. How often do you apply findings from the extant research literature when developing music interventions to impact reading development?
10. Please briefly describe what has influenced you professionally to address reading skills in your music therapy practice. Examples could include research, clinical training, conferences, books, articles, or your internship.

Appendix B  
Recruitment Script

*Please read this consent information before responding to this email request.*

You are being invited to participate in a research project entitled “A Survey of Music Therapists’ Use of Music to Facilitate Reading Development in Children.” This study is being conducted by Edward Roth and Cynthia Cross from Western Michigan University, Department of Music. This research is being conducted as part of the thesis requirements for Cynthia Cross.

Ten participants who respond affirmatively to this email will receive a consent form in a self-addressed, stamped envelope to return to the researcher. Upon receipt of that form the student researcher will contact you to schedule a phone interview. The phone interview consists of 10 questions and will take approximately 30 minutes to complete. Participants who complete the interview process will receive a \$25 Amazon gift card.

Your replies will be completely anonymous. At no time will identifying information be paired with your interview responses. Phone calls will be recorded and data transferred to a password protected flash drive. By responding to this email you consent to be part of the pool of participants for this study. If you do not agree to participate in this study you may exit now. If, after agreeing to participate, you decide that you do not wish to continue, you may stop at any time. You may choose to not answer any question for any reason. If you have any questions prior to or during the study, you may contact Edward Roth at 269-387-5415 or Cynthia Cross at 269-330-1479, the Human Subjects Institutional Review Board (269-387-8293) or the vice president for research (269-387-8298).

This study was approved by the Western Michigan University Human Subjects Institutional Review Board (HSIRB) on (date). Please do not participate in this study after April 20, 2015.

Affirmative response to this email indicates your consent to continue to the next stage of this study.

**QUESTION:**

**Do you currently utilize music on a regular basis to impact reading skills and/or reading development?**

If you do currently utilize music on a regular basis to impact reading skills and/or reading development please respond to this email, including your mailing address and phone number.

Appendix C  
Consent Document

**Western Michigan University  
School of Music**

**Principal Investigator:** Professor Edward Roth, MM MT-BC  
**Student Investigator:** Cynthia Cross, MT-BC  
**Title of Study:** A Survey of Music Therapists' Use of Music to Facilitate Reading Development in Children.

You have been invited to participate in a research project titled "A Survey of Music Therapists' Use of Music to Facilitate Reading Development in Children." This project will serve as Cynthia Cross' thesis for the requirements of the Master's in Music Therapy degree from Western Michigan University. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

**What are we trying to find out in this study?**

The purpose of this study is to identify how music therapists working with school-aged children are using music to teach reading, and the various subcomponents of reading.

**Who can participate in this study?**

Participants included in this study will possess the credential of MT-BC, currently work with school age children, and currently work on reading skills in their clinical practice. Therapists who do not hold the MT-BC credential or currently address reading in their practice may not participate.

**Where will this study take place?**

Data will be collected via a phone interview scheduled at the participant's convenience.

**What is the time commitment for participating in this study?**

Each participant will engage in one phone interview lasting approximately 30 minutes.

**What will you be asked to do if you choose to participate in this study?**

If you choose to participate in this study you will be asked to schedule a 30-minute phone interview with the student researcher. The phone interview will be de-identified and recorded for subsequent analysis.

**What information is being measured during the study?**

This study is seeking information regarding current practice of music therapy as related to reading development in school-aged children. Responses to interview questions will be analyzed for commonalities in language and application.

**What are the risks of participating in this study and how will these risks be minimized?**

Risks are limited to the time required of the participant to complete the phone interview.

**What are the benefits of participating in this study?**

There is no known immediate benefit to participants. However, knowledge obtained from this study may inform future research and clinical practice in this area.

**Are there any costs associated with participating in this study?**

There are no costs required to participate in this study. If the participant uses a mobile phone with limited available minutes to complete the interview then current rates would apply and the participant would be responsible for those minutes.

**Is there any compensation for participating in this study?**

Participants will receive a \$25.00 Amazon gift card.

**Who will have access to the information collected during this study?**

All data will be de-identified and at no time will a participant's information be paired with data. Recordings will be transferred to a password protected flash drive and kept in a locked location. Results may be presented at a Music Therapy conference or published in a professional journal. If presentation or publication occurs, only de-identified data will be presented.

**What if you want to stop participating in this study?**

You can choose to stop participating in the study at anytime for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study.

The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Edward Roth at 269-387-5415, or [edward.roth@wmich.edu](mailto:edward.roth@wmich.edu) or Cynthia Cross at 269-330-1479 or [cynthia.m.cross@wmich.edu](mailto:cynthia.m.cross@wmich.edu). You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

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I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

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Please Print Your Name

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Participant's signature

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Date

Appendix D  
Subject 1 Transcript

1. SUBJECT 1
2. **Hi \*\*\*\* this is Cindy Cross**
3. Hi Cindy how are you this morning.
4. **I'm good how are you?**
5. **Good! Thank you for taking the time to talk to me**
6. You're welcome
7. **I'm pretty excited; you're my first person so.**
8. Okay
9. **We get to set the standard here.**
10. Okay.
11. **We'll see how that goes. So I'll just get right into it, I don't want to take up  
as little of your time as possible. At first I just need some basic demographic  
information.**

**12. What region – you're in the Great Lakes Region right?**

13. Umm – Yeah.

**14. What is your degree?**

15. My degree is music therapy, bachelor of fine arts in music therapy

**16. You don't have your masters?**

17. I have my masters but it isn't in music therapy, it's in mental health counseling.

**18. Okay.**

**19. And do you have any other certifications?**

20. No.

**21. And then, where did you go to school?**

22. \*\*\*\* University.

**23. And how old are you?**

24. I'm 41.

**25. Okay and then what is your current employer?**

26. I'm self-employed and I do contracts for one main company, I actually have another small contract but it's not that big.

**27. Great – thank you. So I'm going to get into the actual reading questions. I just had to get some basic demographic information.**

**28. So the first question is what types of music interventions do you typically use to impact reading?**

29. Okay. I broke it down into categories. The first thing I work on is letter recognition. So do you want specific interventions that I use to do that like descriptions or.

**30. Just the basics.**

31. Okay well, one of the things I do is every session the kids that are at the appropriate age I have letter blocks that I wrote. So I have blocks that I have the letter on one side and then on the other 5 sides I have words that start with that letter, with a picture that corresponds. So we, so in the song I sing "letter block

what letter do we see today and they have to answer that questions, they have to identify the letter and then we work on some vocabulary words that go with that letter. And then, some of the kids are just using the picture and some of the kids you know they're seeing the word that's also on there. And then for the older kids after we finish that I do a verse – think of words that aren't on the block. Then they have to like, think, you know. I usually have them do like three words that aren't on there. That's one song and activity with a visual that I do. For others, letter recognition, I do have some instruments that have letters on them, A-G at least. So we'll play some songs. I have bear bells, xylophones. We'll do some of that. And then I have for also letter recognition; I have a bear, letter bears. It's something I from Prelude Music Therapy where you have some hearts that have some letters and you have some bears that are holding names. So they're matching the first letter with the same first letter in the name. And then I have another activity I made, it's a mail sorting activity where they pretend like they're the post person and they deliver these envelopes and each envelope has just a letter and then I have mail boxes that it's a picture of a mail box with a slit underneath with just one letter on it. So they have a stack of mail that they have to go through and I'll sing about finding one letter out of choices of envelopes and then they have to put it through like one or more choices of mailboxes. And for the older I do the same thing with like words instead of just the letters.

32. So that's pretty much just the letter stuff. And then once I start doing words with the kids I do have magnetic board that's a daily calendar. So we have days of the week on there, and I'll sing songs and then have them find what month.

Especially like for the song what was today, what was yesterday, what will tomorrow be. We sing the months of the year, same thing and then they have to find the right month and get the month position. There's also like weather things. They're looking at the picture to find stormy and sunny and cloudy there's a picture on there.

**33. The word recognition.**

34. Yeah. So...that's words. And then, let's see for kinda like spelling, I have magnetic letters on a magnetic board...so...like, like if my letter of the week is K and we've already done our letter blocks and xxxx the other words, I'll come up with another word that starts with K...so this week it's "kite" and...so...you know it's mixed up letters and they have to figure it out and spell it and then if I can find something that rhymes then I'll throw in another word like "bite" that starts with a different letter and then we'll umm we'll do that. That's on a magnetic board.

35. I do singing books. Every week I take a different book and it's a book that's a singable book. So when I sing to the kids, of course, I'll take my finger so they can see where I'm at so they're being exposed to the words. Of course there's going to be lots of rhyming words and there's going to be lots of books with animals and xxx xxx xxx and there'll be a page and we'll have like xxxx really prominent across the top and they're being exposed to the words that way

36. With the singing books...with the kids that are older I also do some reading comprehension stuff. So like after we read it, depending on their level, sometimes I'll just, after I finish the story I'll go back to the page and I'll sing...umm...if it's

younger kids, I'll be like what animal or something really simple so that the answer's right there in front of them. Or where is or what happened or things like that.

37. And for older kids I might wait until we finish the book and without opening the book I'll ask them some things about what happened and why did that happen, and all of those "who, what, when, where and why" questions. A lot of them is on the IEP. Sure. I work on those questions.

**38. Right.**

39. Ummm. I had some older kids where I've had IEP goals of working on synonyms and antonyms. Okay. So I've just created songs where I sing about one word and then I'll give some choices of...we're just picking out the synonym but which of these like three choices is the right synonym. So we've done that. And the same thing with the antonyms – the opposite – right. That's kind of what I've pulled out right here.

**40. Okay – no that's awesome. Ummm can you tell me, when you're working on these things, did you consciously target the specific music elements and do you find that maybe one works better or differently than another...like rhythm or melody or lyrics or...sounds like obviously lyrics is something you use a lot.**

41. Yeah. Well, for sure, like when I do things like with my letter block song I make sure to set up the lyrical sentence so that the pause is, you know, is very prominent at the end that they're supposed to fill in the blank – correct - something like that for sure. Sort of like days of the week I use a song that's

popular with the kids so they know what's coming, you know the Adam's Family is the one that seems to be used around here so we're always doing that one which is fun.

42. Let's see...umm...let's see...for other things I think mostly, when I think about creating a song where it's giving directions it does make sure that – they're really simple, that there's not a lot of words – right – and a repetition of like what I'm asking them to find, like what letter. And then, like, if they're still needing processing time I just kind of vamp on singing about the letters so they can stay focused on what we're doing. So I do that. Ummm...let's see... think what else...that's the main thing.

43. There's probably some other things that we do.

**44. Sure. But No that's great. This probably feels kind of like a test and it's really not.**

**45. This is really very much an exploratory, cause there's really not a lot, I'm kind of looking at the whole music elements and reading components and there's not much anywhere so that's why we're going this route and really starting at the beginning with it.**

**46. So yeah, don't, your answers are wonderful. Just so you know.**

**47. How do you evaluate the efficacy of your interventions that you use for reading?**

48. Ummm.....well...let's see.....for kids that have specific goals, you know I'm keeping data on their progress. So like, you know specific things. And like on synonyms I'm counting to see if it's working, if she's getting it. Unfortunately,

that particular student, she wasn't really getting it cause she would just, she'd like, if I gave, even if I gave two choices, the one that I would say last was her go to pick but she wasn't, it wasn't really helping her to put it into a song, more than someone talking to her.

**49. Right.**

50. Ummm...so for any of the kids if they're able to learn a song, like if they haven't been like...you know...saying the days of the week and now they are singing the days of the week than that's successful.

51. Ummm...and just from kid to kid, like if they're focused and engaged and that has increased on a particular song, then, you know, I'll keep using it. But if they, you know, if they're not clicking with it then I would do something different.

**52. Okay – great. Excellent. Okay. Shifting gears just a little bit here. Is there a particular theoretical framework you use when you're applying music to reading development at all? That you're conscious of using.**

53. Ummm...yeah, I don't know what it would be. Ummm.

**54. And that's fine if you, if you don't. So..I'm not trying, like I said this is a test.**

**55. I suspect maybe a lot of us don't so that's one of the reasons I wanted to ask the question.**

56. Yeah..in general I would just very loosely say I'm kind of child-centered, cause I'm always following what the kids are doing. I do a lot of improvisation in my sessions.

**57. Well that's good.**

58. Yeah and umm.....yeah. So my only, yeah my structured (?) songs seem to be these. The ones that I kind of described to you today but I do a lot of improv on my keyboard and we do a lot of improv with the guitar and our instruments. We do, you know, a lot of instrument play where we just kind of follow the music that's being made in the moment and not an xxxx songs.

**59. And sort of xxxx engaged with you**

60. Yeah – very much engagement and following them, if they do something, I make sure. yeah – a lot of my kids I'm trying to get them to notice that I'm following them.

**61. Right.**

62. And then work toward them following me.

**63. Excellent. There's a lot of that. Right – gaining that attention from them to even attend to what you're doing. – yes. I get that, totally.**

**64. Ummm...do you ever apply uh – findings from research, like we get the JMT and we get all that, to develop your music interventions when you're working on reading? Do you consciously do that?**

65. I haven't. maybe if I had more time. That would happen.

66. But I'm starting on a course, I'm going to take, umm, the Sprouting Melodies training for the young child development. I'm starting that, you know, this week so that will be interesting to see what I can get from that.

67. Like in the past I have purchased, like at least the Prelude Music therapy, that has a lot of visual aide items. Ummm...I've made a ton of stuff on just my own stuff. You know of laminating things and making stuff that way.

68. **So self-study, which is what I think a lot of us do.**
69. **Okay. And then this is actually my last question here, if you could just kind of briefly describe what's influenced you professionally to address reading skills in your music therapy practice. Whether it's research or training, your internship, books, articles, people you've met, whatever.**
70. Okay ...well I would probably cause it's...being in the school district, cause I work in the school district. Being just in the special education classroom and seeing what they're emphasizing and wanting to support that.
71. Ummm...as the biggest influence. Cause my internship wasn't related. It was a psych setting for kids and adolescents.
72. Ummm... I guess you know, with young kids, a lot of the kids I'm working with are starting at, like, kindergarten age and that's what they are supposed to be doing is learning to read. So it's a lot of times, of course my goals are, for them to be vocalizing you know, communicating, those things. So...most of my goals will read that way. Most of the stuff that I do with them...is all the stuff that has to do with reading and things, you know, colors and shapes and numbers and...all that stuff.
73. That's what we do with them, I don't always track those there's usually how many times they're going to say something, or ask a question or make a choice.
74. Or follow the tempo changes. All that fun stuff.
75. And it's all that things I do with it to make it more helpful for them.

**76. Do you feel like music therapy works, like, for assisting in the reading. Do you think the, like the days of the week song or words you find pretty effective for them.**

77. I would say, you know, that it's hugely effective, and especially if I've got kids where their attention is better with the music therapy than without. Then anything that I present them, it should stand to reason that they're going to have a better opportunity to, you know, absorb that information and stay on task longer and they're more engaged and able to listen and follow. Yeah – I think it's real important.

**78. Excellent. okay...well those are all my questions. Do you have anything else you want to ask me or tell me.**

79. No. no that's it.

**80. Okay. Well I really appreciate your time and umm...if I ever finish this I'll be sure to let you know the results. I'm really kind of excited this a subject I've been interested in for a long time so I'm kind of excited to see what other people are doing with it.**

**81. All right well then, I appreciate your time and have a good day.**

82. All right, you too.

Appendix E  
Subject 2 Transcript

1. Subject #2
2. **Thank you for taking the time to talk to me today**
3. You're welcome, the cat's out her on the deck with me and it's nice.
4. Xxx
5. **So let me get right to it so you can continue enjoying your day**
6. **First I need to ask some basic demographic information**
7. **Your degree is from \*\*\*\* right?**
8. \*\*\*\*
9. **Well \*\*\*\*, that's right. Why did I think you were from eastern? And then you have a Bachelor's degree, do you have your masters?**
10. I have a Bachelor's degree
11. **And your current employer is?**
12. \*\*\*\* \*\*\*\*
13. **\*\*\*\*, ok. And then, your age?**
14. My age is 56.
15. **Sorry about those personal questions. So that's just the basic demographic information. So I'll get right to the questions. The meat of the matter here. What types of music interventions do you typically use to impact reading skills?**
16. Okay, well I um, when I, I have a hello song, just starting with preschool special ed. I have a hello song and a good-bye song. And this year and last year I started implementing, after we use this song, I started implementing having a line from the song on a poster. When we would sing that line I would follow along with my

finger or a pointer, and so then when I had a helper I would have the helper follow along with the pointer and then as we moved through the year I, I think I actually jumped from having the one line to having 4 lines. And I modeled for a long time going along left to right and going down. And then I had helpers try it with varying degrees of success. And then when I work with a CI classroom we, we do a lot of songs where, well we play tone chimes and then we'll have, like on a power point, I'll have the words to the song and they're divided up according to how you play a chord. And you know they are really written rhythmically. This is students who are working on, you they are at different levels of texts that they're reading. Different to the point of all of that or parts of it, in the CI room they're reading at a lot of different levels so I try to gear it toward whoever is helping me, toward the amount I'm asking them to read.

17. So a lot of things I'm doing is trying to model that left to right, you know following reading and moving your head with the page.
18. I think that's the majority of things that I do, as far as reading a line.
19. And then I, for my preschoolers, I came up with a music or instrument alphabet song and kind of piggyback on zoophonics. And so we will, I have my little song I sing, Instrument Alphabet – everybody play, I do the whole song, and then if I'm introducing the guitar that day I'll say "G is for guitar, guh, guh, guh." And so we do the way that they do sounds rather than "gee, gee, gee" I did that the first time and thought 'no.' I learned that is not how you do it. You use the sounds.
20. I'm showing the object first and we might find it in the pod and then I'm also showing like a flash card of it really. And I don't go through the alphabet, you

know, I do have agogo bells that I don't, I just pull out whatever I'm introducing. You know like in the beginning of the year with xxx the first thing we play is egg shakers cause those are easy to start with. You know the E card would be first. It doesn't go alphabetical.

- 21. So it sounds like the components of reading you typically target then are left to right, tracking, letter recognition, letter sounds. Did I leave anything out?**
- 22. Umm okay, do you use specific music elements to address specific reading outcomes when you're thinking about designing your activities do you think about specific elements like rhythm, meter, whatever...at all?**
- 23.** Umm...no I'm really bringing in the written word after we have the music. So it's like we can also show what we were just singing and playing. So no I don't start with or design it with that.
- 24. Umm...all right. How do you evaluate the effectiveness of your music interventions in relation to reading? Do you take any data or whatever?**
- 25.** I don't take any data. I'm doing I think you would say more on the spot evaluation. How well the child is succeeding at it. I may pull away one of the lines or I would do like for the prompts I might pull in a little more prompting if they're having trouble doing it at all. So just evaluating in the moment but no I'm not taking data on it.
- 26. Umm...all right. Kind of shifting gears a little bit. Is there a predominant theoretical framework that you use to apply music interventions in your thinking about reading umm or that influences you maybe in your work?**
- 27.** Can you give me an example?

**28. Well is it like trial and error or is there you know a theoretical framework?**

**One of the things I'm looking at is kind of the music elements. I'm coming from the NMT perspective of how music affects your brain. Or maybe you're more behaviorally oriented. Something along those lines.**

**29.** Umm...well I know that I reference for myself the sight words and the Doltsch, you know the different levels of words. And I think I'm really doing more scientific behavior. Like modeling, doing it and then. Like a trial and error kind of thing.

**30. And do you think about that. And this is, there's really no right or wrong answer here. It's one of the things I'm trying to find out. Do you think like the sight words and the behavioral and the modeling, is that, do you apply that every time you do reading interventions? Is it something you constantly think of? Or is it just sort of a background theoretical framework that you apply?**

**31.** I think it's the background. I think I for myself and I talk to teachers and I see what they're doing in their classrooms, I look at the visuals and I. like for example in my tone chime choir. I was just in my one teacher's classroom at the beginning of the year she had a job list. And then she put names by jobs and then I thought I could do that. I've done it differently but I made a chart of jobs for tone chime choir and we're reading that together. I'm always thinking that this would be similar to what they're doing so it would generalize to that a lot. Like how can I do something that's similar that has music as part of it and learning it again in a slightly different way.

32. I think that's usually what I'm thinking. How can I add to what they're doing.

**33. In the classroom.**

34. Yes.

**35. How often do you apply findings from the research literature when you're developing music interventions for reading?**

36. I would say zero right now. I mean I have off and on but currently.

**37. And there's not a lot so I'm just curious what people are looking at.**

**38. And then I have one more question. Please briefly describe what has influenced you professionally to address reading skills in your music therapy practice. So why do you do reading with your music therapy?**

39. Well, I never used to. I graduated in 1980 and it was all aural. It's different than what I was doing in the music therapy clinic. Strumming my guitar xxxx xxxx xxxx xxxx xxxx and with no visuals of any kind just singing. Maybe we were playing instruments. And now you know I worked quite a bit when I was a contractor with autism and all of the visuals. So it's like I want to do nothing that doesn't have visuals. And so I'm so aware from my preschool and my ECSE students about kindergarten readiness and my daughter is a kindergarten teacher and it's so academic and so much reading

**40. So I feel that it's just absolutely necessary to bring it in as much as I can.**

Especially in a preschool classroom, to get all that, this much content in. And I just, it seems like such a painless way to begin reading when you're already singing the words, you're already know it musically and then you see it. You just like I guess it's kind of like Suzuki, which I've never been trained in, but you

know first it aural and then they see it written. I've just gotta give that to them so it makes sense,

**41. Excellent. Those are my questions. Do you have any questions or comments you want to add?**

**42. No.**

**43. Well I will let you know whenever I get this pulled together. Kind of a summary of what the results were and I really appreciate your time.**

Appendix F  
Subject 3 Transcript

1. Subject #3
2. **How are you today?**
3. I'm good how are you doing?
4. **I'm good thanks. I had to make sure my app was kicking in here.**
5. **Well thank you for your time. I appreciate being able to talk with your for a little bit here about this. You're in Texas right?**
6. Yes ma'am.
7. **That's kind of cool. So first I need some basic demographic information. What region is Texas considered from AMTA?**
8. I think its south.
9. **What is your degree?**
10. I have a bachelors.
11. **And do you have any other certifications besides the bachelor's degree?**
12. No
13. **And where did you go to school?**
14. I went to \*\*\*\*.
15. **And then how old are you?**
16. I am 22.
17. **Oh so you're just started now?**
18. I moved to \*\*\*\* in January.
19. **Oh that's exciting, congratulations.**
20. Thank you.
21. **Where do you work**

22. I work at \*\*\*\*.
23. **So school, for a school system.**
24. **That's all the demographic info I need so we'll move to the meat of the interview here. Feel free to answer however, whatever comes to mind. It's very much an exploratory study so I'm not looking for any particular answers or anything like that. It's just what is it that you do, that's what I'm looking to find out.**
25. **Question one. What types of music interventions do you typically use to impact reading, reading skills.**
26. Okay. I'm trying to think of specific examples. For reading, reading covers so many different areas. But one area that I work on with a lot of my students is rhyming words. Is that?
27. **Rhyming words? Yes.**
28. So we use lots of different things. I have some folder activities though I'm moving more away from that. And just having piggyback songs with the folder activities and then they have to find the rhyming words.
29. Also we do rhyming words like, we may have a song and it's the color blue and then they have to come with a word that rhymes with that.
30. Like a fill in the blank kind of song.
31. So we do a lot of rhyming words but I also do just basic song writing activities. Sometimes piggy backed sometimes my own made up song writing songs. And they have to help me spell the words and write the words and a lot of times they're rhyming words again.

32. And then we do make up, one of my students he is learning to spell. One of his IEP goals is to spell color words so we make up little songs for spelling color words. And that's not exactly reading.

33. **Well but it's a component of reading.**

34. Yes. He can recognize the color words most of the time. But he has to be able to recognize them to be able to spell them I guess.

35. Let's see what else.

36. **Are there other reading components that you target when you're working with your students?**

37. Can you give me an example?

38. **Maybe literacy or do you kind of do word recognition, letter sounds, letter recognition, phonics. Any of those? You know reading that has a bunch of different parts to it.**

39. Yeah. We, I do phonics, just kind of inter mixed. I mean it's not their IEP goal but we're coming into contact with a specific word within the song and they can't, then we work on sounding it out and how to sound it out basically. And then kind of just inter mixed into it.

40. If I had a specific IEP goal I guess I would have better examples.

41. **Good. Do you use specific music elements to address reading behavior and by like music elements I mean like rhythm or lyrics or form or any of those?**

42. I think rhythm. Sometimes we do use the, we'll have them play the drums and they'll spell a word on the drum. And then also do syllable on the drums. You

know each syllable gets them playing on the drum. So that would be more like rhythmic. And then, what's another thing you said?

43. **Rhythm or lyrics or form...**

44. Well lyrics we basically do with the song writing and we encounter several different kinds of reading things. Form...I've never really explored that. Going back to rhythm I did try at one point with someone who had autism to read something and they had like a specific sentence and there were certain points in the sentence that were enunciated and they were supposed to play the drum on those. It was part of speech that would have necessarily been enunciated but it didn't work very well.

45. **Its interesting cause this isn't something that has been explored a whole lot so it's been kind of interesting to find what people are doing. Okay.**

46. **Good. Let me move on...is they're anything else you wanted to say about interventions that you do or anything or did we cover it.**

47. I think we covered it.

48. **Shift gears a little bit. How do you evaluate the efficacy of the interventions that you do use for reading? Do you do any formal or informal evaluation? How do you decide hey this works, hey this didn't work?**

49. I don't do necessarily a formal evaluation. I take data on their IEP goal. So you know if they, depending on what the IEP goal says. Like that one student who is supposed to be able to spell color words and I think his IEP goals is actually he is supposed to be able to read and write the color words. And so for that it's, okay well today we worked on colors red, blue, purple, pink, and white or something.

And his progress so far and then, but or how many prompts did he need or that kind of thing.

50. So I think I mean I take data on that, IEP goals. I do have kind of an unusual situation. I do see all of the students that have autism that are in autism classrooms. So we have autism units, you know, elementary, middle school and high school. So those students I don't have, they don't have music therapy on their IEP if that makes sense. So in that case when I, when we do reading interventions, a lot of times it's more of a support for teachers and then that models an idea for them and then they use it in the classroom. So and then of course, I can tell you know just by observing whether it is working or not.
51. You know if they're understanding and they're improving after a few weeks of doing something.
52. **Okay. Thank you. All right, I'm gonna shift gears a little again here. Do you operate under a theoretical framework for what you do with music in particular with reading. When you put stuff together as far as – some people have the NMT, some people are more the behaviorist. One person commented they are more child centered. Any thing in particular that kind of pushes you one direction or the other?**
53. I'm very much a behaviorist. That's just kind of our school that's kind of what we do. Well not just even in the school system but in the school that I got my degree at. So just behavioral that's more the approach. I would just say behavioral mostly.

54. **Okay. A couple more here. Is there, and you may not be able to give me an example, but is there a way that you use behaviorism when you're working on reading skills in music therapy. That you can think of to tell me?**
55. Let me see. I don't know.
56. **Do you do it often, and most people have honestly said no so if you say no that's fine too. But do you find that you think about that when you're doing your reading and music therapy or is it just sort of in the background and that who you are.**
57. I think it's just in the background. I mean you kind of become a music therapist in one area or another and like I said within our degree program we're kind of pushed towards a more behavioral approach so that just becomes your natural process. So I don't usually, I can't think of any time that I specifically thought about having a behavioral approach in a specific intervention.
58. **Okay. How about research. How often do you apply things you've read in research to what you're doing with the music therapy?**
59. Well, I'm so new. I, since I have just finished my coursework in school before I started in my job, I think I did it quite often just because it was so fresh and new to me. But I didn't go searching for research specifically. Because I already kind of remembered what I had acquired. But I can see already where I will be going back to research and back to things as I'm different, not necessarily problems but different circumstances come up in the school system. With the students and their reading. So I have used it some but not completely intentionally because I'm so new.

60. **Right, it's still really fresh in your mind from school. All right – last question.**

**Can you just describe what influences you to address reading skills in your music therapy practice. And it could be anything from you work in a school, research, your internship training, your university training, books. Anything that has influenced you to work on this particular aspect.**

61. So any specific research that has helped me in specifically reading...

62. **Anything that, well, anything it doesn't necessarily have to be research. But what influenced you to work on reading with music therapy?**

63. Well, a lot of their IEP goals and that kind of ...our system is kind of strange. I, we so with the IEP goals I'm supposed to do it as a support for teachers so whatever the teachers' IEP goal is for them I kind of take that and use, if it's a reading, specifically a reading. I take that and I write a new goal based on music. But it's still the teacher said, or this is something we're going to work on. So it's more of a teacher support so I don't necessarily get, which this is changing I'm thankful, but I didn't necessarily get a choice. I didn't get to decide what they need to work on in music. But that is changing.

64. So later I can say, they don't have any music, they don't have any IEP goals that address reading but I think this is an area, this is a big area of reading that we need to work on in music. I think it will be helpful and I can do that.

65. So it's I mean we're changing things around and yeah.

66. **Okay.**

67. I didn't ever, maybe. I'm trying to think of anything else that would have influenced me. I mean some of my students they don't have IEP goals and I just

kind of used music with the reading because I know their teachers work with them on reading. So I, and like I said I'm kind of a support in those autism units. So I knew teachers worked with them in reading so I said okay so let's come up with some kind of activity that I can model for the teachers and they can use in their classrooms also.

**68. Okay. That's fine. And that's actually a really common, I think...I work in a school too so I think those of us that work in schools, that's sort of our focus anyway cause we're in a school. Makes a lot of sense.**

**69. Okay well that is all my questions, those are all my questions. Did you have any questions you want to ask me or any comments?**

70. I don't think so, I did look up and it is the south-western region

Appendix G  
Subject 4 Transcript

1. Subject #4
2. **get everything situated, I wanted to make sure you had time once you got everything settled.**
3. Yes, I'm fine.
4. **I really appreciate you taking the time to talk to me today. These have been taking about 20 minutes as all so I won't take up too much of your day. We'll get started and do whatever you need to do. I need to start with a little basic demographic information and then I'll get into the study questions.**
5. Sure.
6. **What is your degree? You have a bachelor's in music therapy is your master's in business?**
7. Yes. I'm in the doctorate program right now for a doctorate in psychology.
8. **Where is your, did you get your music therapy degree.**
9. \*\*\*.
10. **And where do you currently work?**
11. \*\*\*\* music therapy services.
12. **That's your own business.**
13. Yes.
14. **How old are you?**
15. 36.
16. **Okay. That is all that information. I'll jump in now, into the actual study questions. If you need feel free to ask me to clarify. So to start – what types of music interventions do you typically use to impact reading skills?**

17. Will I work primarily with 0-3 so it's a lot of pre-reading skills. So I focus on sound production and one to one correspondence. And then we do, we sing, I sing books to the group. And I, this is appropriate for parents to do as well so I encourage the parents to do the same things at home.
18. I have a minor, my minor was in speech and language pathology. I don't know if that matters.
19. **So you probably use a lot of that as far as the sound and things like that.**
20. Yeah. So basically I teach the parents to sing familiar songs like one target sound for vocal song. So if they're working on sound production, just to sing "Row, Row, Row Your Boat" on the 'b' sound or whatever sound they're working on. Speech therapy just for like auditory bombardment and that kind of thing
21. And then, in the past I've worked, you know when I've worked one on one with school age kids. We'll do like letter identification songs and songs where they have to find the word that starts with a certain letter. So those kinds of things.
22. **So it sounds like you use a lot of song activity primarily. As opposed to instruments, rhythms or whatever. Which makes sense since your working with 0-3 that makes a lot of sense.**
23. Yes primarily.
24. **Do you use, when you're thinking your interventions, do you use or think about specific music elements like rhythm, harmony, timbre etc. to impact?**
25. Yeah. Definitely the tension resolution like using ending on the V7 so that stimulates the client to fill in the blank.
26. **Okay.**

27. And then like repeated rhythm for sound production and definitely melody. I guess that counts too.
28. **Okay. Great. How do you evaluate the efficacy of the music interventions that you have designed for reading?**
29. Oh whether or not, so like if we're doing letter identification just counting how many successful trials the client produces. Pretty much, pretty much anything else is pretty behavioral. Counting how many opportunities and how many successes. Than it's a percentage.
30. And then with the parents support groups and I just get feedback from the parents.
31. **That's excellent too.**
32. And what's working cause obviously they're not counting.
33. **They would probably notice the changes, like hearing more sounds**
34. Right.
35. **Or they're doing better at it.**
36. Yes,
37. **Which is probably exciting for them.**
38. Right. And I give them a whole list of books that they can totally sing to their kids because they already know the tunes.
39. **That kind of leads into my next question...since you mentioned behavioral...the question is if there's a predominant theoretical framework that you apply to music in this setting and is it behavioral.**
40. Yes definitely.

41. **Ummm...and do you, this is worded kind of funny but do you purposely engage in applying that model when your developing your music interventions to impact reading? Are you thinking of the behavioral stuff that you've learned?**
42. Yeah because anytime I'm trying to teach a new skill the behavioral model seems to work the best. You know it's a great way to check whether something's working or not. So I do.
43. But I'm learning about all these theories in my doctorate program at school.
44. **I know there's a lot you don't realize how much is actually out there.**
45. Right – there's more than behavioral out there!
46. **Okay. How often do you apply findings from research literature when you're developing interventions for reading? Or do you seek out research to use it?**
47. I usually only seek out research if I encounter a challenging situation. And then if I happen to read research, if I'm reading leisurely or I'm reading for school and I find something that, then I usually will incorporate it. I don't seek it out just to seek it out.
48. **You're probably doing a lot of reading right now.**
49. Yes I do, way more than I can handle. But not simply just for reading. But when I do see things that apply. I'm like "oh that's good to know" and I can apply it right away.
50. **All right then this is actually my last question here. If you could briefly describe what has influenced you professionally to address reading skills in**

**your music therapy practice. So whether it's research you read, clinical training, books, people, etc.**

51. Definitely clinical training and because I have the minor in speech therapy or speech and language pathology like I thought a lot of it tied together. And then I have, then I have my own kids they're 5, 7, and 12. And working with my first one and teaching him like reading skills I totally incorporated a lot of that stuff with him so then I just used all those things with the clients.
52. I think if I hadn't had him I probably wouldn't be as into it as I am now.
53. **That makes sense.**
54. So then I've used the same things with all three kids. And it seems to work really well. I try to sing the books to them and they fill in the blanks when we're singing the book. Xxxx xxx xxx and they can fill it in. and we do a lot of pointing to the words while we're singing the song so they can feel the beat. And correspond, cause my youngest has the hardest time with one on one correspondence issues like not just with the reading. I want to tell the preschool don't even work on reading with him yet because he still can't like do it to a beat. His whole body is just not there yet. But they look at me crazy like what are you talking about? Not yet.
55. You know all those things go together, if they can't jump on xxx xxx they're not going to be able to point to the word.
56. So I mean explaining xxx the parents all the time about you know these are all important pre-reading skills. If they can't do this they're going to have a really hard time when they try to do that.

57. **Cause people don't always realize that, that there's a progression.**
58. No they don't
59. **When you use a lot of singing books, do you find that you use books that are actually songs or do you write your own songs.**
60. I use what's already out there. Mainly because of the parents, you can check them out at the library or go to the bookstore. I've been wanting to put videos up of me like singing the books. Showing the books so they can access that to learn the tunes. I haven't gotten to that yet though. I don't know if I will.
61. **That's a great idea.**
62. Yeah and have a link to Amazon to purchase this book here. That way I can refer the parents. If you have trouble singing how the book is supposed to sound you can go to my website. I haven't done it yet cause I'm so busy.
63. One of those things. People are lecturing me on sleep.
64. **And you've got kids and in school. And your kids are little yet.**
65. By youngest is starting kindergarten so they can all stay after school and be the last kids to get picked up...
66. **All right well those are all my questions did you have any questions or anything else that you wanted to tell me.**
67. No I think that was it. I hope I was helpful.
68. **It is. It's been very interesting so far. I appreciate your time and if I ever get finished which I'm sure I will I'll send you the results. I**

Appendix H  
Subject 5 Transcript

1. Subject #5
2. **Thank you for taking the time to talk to me today. It's been a lot of fun so far. So I will just jump right in so I don't take up too much of your time. I need to start with just a few demographics here. Where is your music therapy degree from?**
3. \*\*\*\*.
4. **And do you have a bachelor's degree, master's degree?**
5. I have a bachelor's degree in music therapy.
6. I have a master's degree but it's not in music therapy.
7. **What is your master's in if I might ask?**
8. Adult education.
9. **Okay. Any other certifications or anything?**
10. I'm a certified teacher, music teacher in the state of \*\*\*\*. It's actually my current job I'm a music teacher in a center school for special needs students with moderate to severe disabilities ages 11-22.
11. **Sounds like you've told people that before.**
12. **And then how old are you.**
13. I am 58.
14. **All right those are my basic questions so I'm going to jump into the actual study questions right now and the first one what types of music interventions do you typically use to impact reading skills?**

15. Well for instance with my autistic, I have done, to tell you the truth, there's a preschool site that has some great pre-reading things like where's a – I do letter recognition and sounds.
16. With my autistic kids I started something called book and song where I would find a book that had pictures and vocabulary words and make a song to go with it. With the words. With my middle school kids xxx young children and we would hear it and I also had the words visuals on the board. So that they compare the hearing of it with the sight of it yes. those are some that I use.
17. **And what, you mentioned a couple reading components – letter recognition and sounds. Are there other reading components you typically target with your music interventions?**
18. Components of reading? I don't know you're going to have to be a little, give me a little
19. **Well you mentioned like, some people work with word recognition. What parts of reading are you, is it mostly the pre-reading or are there other, fluency. What other aspects are there?**
20. Yeah, we don't, we do work on word recognition like I said with the book and song. A lot of mine do not because they are moderate to severe they don't read. And so we do work a lot on letter sounds and letter recognition. Not so much literacy.
21. **Do you use specific elements to address in your interventions that you're working on. For example maybe some people develop rhythm, you mentioned you do the book songs working with lyrics.**

22. I'm sorry I'm not able to understand you very well.
23. **I'm sorry, let me start over I do tend to talk fast so I will slow down.**
24. **Do you use specific elements of music when you're addressing reading or pre-reading skills. Such as rhythm or lyrics or form. Do you use any of that?**
25. Well...yeah. Rhythm definitely. Because we speak in rhythm. Well what I have learned is that when you are trying to teach something and you want to, if you can get them to say it over and over in rhythm. You know like the different syllables and things like that in the word as opposed to our speech, which is not rhythmic.
26. **Right.**
27. They tend to remember it better. So yes I definitely use rhythm.
28. I'm sure that you, musical elements, I'm sure that I use probably tempo. And speech patterns to go with the words, which would have to do maybe with articulation. Like loooonnnng/short! So that would be also to a certain extent pitch.
29. **Anything else in that area that comes to mind?**
30. I'm trying to think if I use...well you use melody to teach a lot of different things I'm not sure I really approach reading in that sense. I won't include melody. But obviously dynamics would have something to do with it.
31. **How do you evaluate the efficacy of your music intervention directed towards reading?**
32. Well that's really good. A good question. Yes. well I tell you what with the, I'll just go back to when I was doing the rhyming words with the middle schoolers, we would point to the words as we were doing the CD. And they were echoing it

so they could hear it, echo it and see it at the same time. And then I would go around the group, these were small groups less than 10, and they had to, I would give them a first rhyming word. Of course they were free to take it from the list that was still on the board or they could come up with one of their own. Which of course I was really looking for that. To see if they could self-generate their own word. But I did notice, so and I'll tell you most of what I got was repeating the words that we had gone over in the song. But on some of them I noticed that whatever word I gave them they would give me the next word in the list. Which was kind of exciting which meant. Because I wasn't going in order in the list. That meant that they were reading it.

33. So that was one evaluation I used like with the rhyming words. With the autistic kids and the book and song a lot of them were non-verbal so I really couldn't. and also very low on the cognitive scale so you know they probably were reacting to the picture. And they would point which I'm sure is what their classroom teacher had them do. But I don't know if they were reacting to the picture or the word. I would say the picture.
34. And then another way that I did was letter recognition. I would put the, we would sing the letter sometimes in order and sometimes in random order. Then I would say the sound and they would one by one they would have to find the letter and bring it to me and give me the letter name and it's sound. Cause a lot of times in music in those type (Dr. Jean – that's what it is – the preschool site, it just came to me. She's a preschool site but when you're dealing with reading activities they can be adapted for older kids).

35. We also, I was, we had to do with the goal was to teach the musical instruments of the orchestra. But I was pairing words with pictures and I would have two different words. I would have a card with the word on it and a card with the instrument on it and I would have them match the word card to the instrument card. So that was another evaluation that I did.
36. **Great.**
37. That was for older kids – middle school and high school.
38. **All right. Next question. Is there a predominant theoretical framework that you use to apply your music interventions to reading development?**
39. No. my education was so long ago and I have done so many different things. I would not be up on that. Doesn't mean I shouldn't be.
40. **Right – or that you aren't doing it.**
41. Right that I'm not following something that's out there. It just means that I don't have a...I guess phonics would be a. I don't think that's a theoretical xxx. Or maybe it is...
42. **In the reading world..**
43. Yes in the reading world, phonics. And I'm also familiar with the sight words in adult education and you know they teach the CVC. I'm familiar with a lot of different things like that and I'm sure they all play a part in my presentation. But do I follow one specific theoretical approach – no.
44. **Do you find any well let me just read it here. I find myself trying to ask questions in normal words. How often or if ever do you apply findings from**

**research literature when you're developing your music interventions for reading?**

45. You're saying do I apply research literature?

46. **Yes**

47. Anytime, and I do. I do follow research. I read my professional journals. Any time that I can find something that I think is relevant to and workable then I am absolutely prone to apply it. So you would say, I would say often.

48. **That's great, cause it's easy to just do your work and not inform it with other stuff.**

49. Well I'm always trying to find ways to do it better and reading journals and I take online courses for recertification. And I just took one, it was actually a pre-k, it was autistic, pre-k music. I forget the name of the website, I mean the course offering. That was really quite helpful. And I'm getting ready to take another one. Music Therapy in the Special Needs Classroom. I try. Like I said I'm always looking for things to make me better at what I do.

50. **I'm down to my last question. So if you could please briefly describe what has influenced you professionally to address reading skills in your music therapy practice.**

51. What has influenced me...well oh because as a music therapist. I didn't do music therapy for a long time and then I started in 2003 as a private contractor with the county school system. And because I was in the special needs classrooms and those academic skills. We address social skills we address the obvious. Academic skills were some that needed addressing so that was my primary motivation. Was

too...I would go talk to the teachers before the year began. And often throughout the year. And I've forgotten about one other thing that I used to use. Anyhow, that was my primary motivation was because I was in the school system. But then that was part of the needs of the students. Student needs I guess.

52. **All right. Those are all of my questions. Did you have anything else you wanted to tell me or ask me.**
53. I had just thought, it's still the same thing, of pairing a picture. Those are primary ways that I try to influence reading is pairing visuals with words. So and what is your study doing exactly?
54. **I am talking and doing these interviews just trying to see what music elements to influence reading and kind of seeing what is out there cause there isn't a lot of music therapy research on this particular topic.**
55. There is not.
56. **So I'm interested to see I took the NMT training a few years ago and they emphasize the music elements in using rhythm and form and all the music elements and using those to develop your interventions. So I was curious to see if people do that or are we as a profession are we even aware. Or do we just do it by instinct or is it becoming more informed by the research. It's very exploratory just to kind of see what is out there.**
57. It sounds interesting. I don't know if you'll be published. I don't know if they publish master's thesis. Anyhow some I just thought of as you were saying that that would reflect on that, kind of a shot in the dark is because I'm a music teacher as well as a therapist so I kind of have a dual role in my school. I'm

thinking that, so I'm teaching real basic rhythm notation reading. You know quarter notes, eighth notes, half notes. And I would think that the discrimination required, you know you teach them the parts of the note so that they know that they have a note head and a stem so that they can start – discrimination is probably the skill that I see as most lacking in students that don't read. They just don't notice the differences in things. And so that would be something you might want to put down. A way that is actually is, anytime I would think that even though the foremost goal is reading music notation it's still a form of literacy. And so that might be something that you might want to look at. Is how you know, teaching elementary music reading whether it could have any sort of impact on regular reading or literacy.

**58. I appreciate that. Well I thank you for your time...**

Appendix I  
Subject 6 Transcript

1. Subject #6
2. **Well thank you for agreeing to take some time to talk with me. Is this still a good time?**
3. Yeah, absolutely. I almost forgot but I'm at home so.
4. **Okay. That's all right I totally understand being busy so not a problem.**  
**We've been taking about 15 or 20 minutes or so, so we won't take too long**
5. Okay great.
6. **I need to start with just a little bit of demographic information and then I'll get into the questions. Where is your degree from?**
7. From \*\*\*\*.
8. **And you have a Bachelor's degree in music therapy.**
9. I'm in the equivalency and master's equivalency. And I'm in the process of finishing a professional paper right now. But I'm board certified and I'm working.
10. **Well I understand that. And where do you currently work?**
11. At a non-profit organization that's specifically music therapy based and it's called \*\*\*\*.
12. **Okay. And then how old are you?**
13. 26, I turn 27 this month actually.
14. **Well Happy Birthday! All right, that's all the demographic information and I'll jump into the study questions at this point in time. And we're talking about reading so the first question is what types of music interventions do you typically use to impact reading skills?**

15. Most of the time I do songbooks. And I use song book quite often and it can range anywhere from really elementary reading to, I would say, not too high functioning but up to like middle, medium grade level.

**16. And you do, these books that are already songs or do you write songs yourself?**

17. Pretty much every one that I've done is one, it is already in existence. Some of them like I've compiled myself but their not original songs.

**18. Okay. What components of reading do you typically target when you're working with them?**

19. Most of the time it just kind of depends on my client. So it varies so much. Sometimes it can be anywhere from identifying letters. So it's like I'll have them visually track the words, like more simple words. I might ask them to spell out the letters and then we'll sound it out together. Sometimes if the client is more advanced I'll help them enunciate it and kind of work on the sounds of the words or just generally reading and like identifying words that are more advanced that they don't know and help kind of guide them through. Being able to actually print out the word and figure it out themselves.

**20. Okay. Do you use specific music elements to address reading outcomes. Or I know you said you use songbooks so do your focus on lyrics, melody, harmony...any particular elements when you're thinking about reading interventions?**

21. Most of the time I try to use songs that have like a strong rhythmic input and I try to use more rhythm, especially like with clients who have difficulty with...what is

the word I'm trying to think of...prosody? Kind of like rhythmically helping them speak through on different syllables or something like that. Most of the time a lot of my clients still know, they'll be able to recognize the song like if we went through a couple repetitions from week to week and they'll be able to sort if recognize the melody but a lot of times if they sing along or read along with me, a lot of the times they're not necessarily matching pitch. So I've found that more so if I provide that strong rhythmic basis it has more success.

**22. Okay. How do you evaluate the efficacy of your music interventions that you use for reading?**

23. For reading, well xxx xxx xxx xxx for the majority of my clients I don't have their major goals based in reading necessarily. Sometimes I have like sub objectives. A lot of times I'm more so cognitive based and in a sense of attention to task. And then for some of my clients it'll be a little bit more specific towards reading in the sense of like enunciating words properly. But most of the time I do it on, if I'm specifically looking, I'm thinking of one of my clients. He is really high functioning and just needs a little bit of prompting with identification of words. Usually that have more than 2 syllables.

24. But usually how I track that is I use a tally system. So it's like usually we try to aim for him initiating help versus asking for help if he needs it and then it's based on like getting towards being able to identify the word or pronounce it with no more than one prompt. And most of the times it's based off, if I'm remembering objective off the top of my head, it's 4 or more with no more than one prompt per session. So I kind of base it on that and then each month I assess the progress and

that. And then each quarter we see his progress and I just finished my first quarter with him and actually kind of adjusted his goal. Trying to remember how I adjusted. This week was the first week that I see him with his new goal. I think I increased it to 5 or 6 because he's progressing so well. Kind of making it a little more challenging.

**25. Good. So it sounds like it's making some progress for him.**

26. Yeah. Like he really enjoys the songbooks so it's great. If I, previous sessions there's one where I didn't bring it out and he was very upset. So we incorporate it in, added it right at the end.

**27. Okay. Shifting gears just a little. Is there a predominant theoretical framework under which you apply music interventions to reading development?**

28. Ummm...not sure. I come from most like a sensory approach cause most of my therapy. But in my reading I don't know that necessarily applies because usually I try to implement the reading interventions based on their arousal level. I never usually start with it. Usually I start with some kind of sensory motor some kind of input thing. Kind of see where their arousal level is. And when they're ready to sit down and kind of focus and not need as much support in terms of sensory needs, then I start, I kind of work with the sensory book and get them cognitively engaged. So it's definitely, I try to use it for attention to task almost. I would say with at least 80% of my clients that I see. Does that kind of answer your question?

**29. Yes. okay. All right. How often do you apply findings from research literature when developing music therapy interventions for reading?**

30. Specifically for reading I really haven't. I haven't done any, I really haven't been reading a whole lot on that and not because I'm not interested but mostly because I'm working on my paper and it's on based in like traumatic brain injury with speech rehabilitation. So it's like I've been reading a lot of literature but not really anything on that.
31. It's kind of what interested me it's like 'oh I've been using this a lot' and before I started working with children with disabilities. My internship was in hospice. So it's like a big change. I had observed some people like at my agency using songbooks. And then it was just like wow everyone seems to love this, I need to get some of these.
32. I'm trying to think if I, I don't think I've really read anything in speech rehabilitation for TBI but that is something that I'm interested in now that I'm thinking about it.
33. **That's a lot what this study is about anyways. Trying to see what is out there and what are people looking at. It's very exploratory so that's, that's perfect. Sometimes it's almost good to know that people aren't doing that because it shows you which direction to go.**
34. **All right and my last question then: please briefly describe what has influenced you professionally to address reading skill in your music therapy practice?**
35. Oh okay, I think definitely in the beginning like I was saying...just kind of from peer supervision within my agency seeing other people; other therapists use it and implement it. And talking with them and asking them "Do you see progress?" and

“Do you see benefits?” And also I’ve had in the beginning when we’ve had intake forms with clients. We review those but then we also have a meeting with the parents and ask “what are you interested in us most working on? You know what are their primary needs according to you. And we had a lot of parents of clients indicate “oh we really want him or her to be able to improve their reading skills and their social interaction.” So I’ll base it off of that if it’s most important to address.

36. Let’s see, other...I’m trying to think if there’s anything else...definitely like the availability of resources in our agency. That kind of contributed to it to. They gave me a big basket and a little suitcase full of therapy related things. And they had these songbooks. At first I didn’t use them but then when I kind of saw them used I thought I should use them more.

37. I’m wondering...am I answering that question okay?

38. **Yes. that’s absolutely a good answer because again that’s sort of an unknown.**

39. I’m thinking like in school there wasn’t anything specifically that they said like “you use this during this intervention” or I definitely, I had one practicum supervisor who was also, who was a master’s student as well and she would write her own. And I thought that was really neat. She would write her own and make her own recordings. And a lot of the time she would talk about how important the visual prompt, like the multiple prompting, or multiple tools. Having like your visual tool with the book and then being able to have a recording in the background and then being able to sing on top of that. So you have like multiple

sensory things going on. And I definitely think that having the visual and the auditory aids definitely engages a lot of my clients more. More so than just words on a page or whatever.

40. **Great. All right. Those are all of my questions. Do you have any other questions for me or any comments or anything I should add?**

41. No I don't think so but I'm looking forward to seeing, it's a literature review, is that right?

42. **Basically. Well I've already done the literature review and then I'm doing these interviews. I'm going to interview 10 people and see what are people doing, if anything. And why are they doing it that way. I work in a school so that's, you know the reading thing has been really interesting for me. I've also had some NMT training a few years ago so that's where the music element part comes in. To see what are we doing? Are we looking at rhythm? Which I think a lot of people are. Are we looking at form? And how are we applying those musical elements to the interventions, or not.**

43. It's really exciting. I look forward to reading that.

44. **Thank you for your time.**

Appendix J  
Subject 7 Transcript

1. Subject 7
2. **Well I will jump right in so I don't take too much of your time and let you get back to your day. I have a few just demographic questions I need to ask and then I'll jump into the actual study questions if that's okay.**
3. **What is your degree – do you have a bachelor's or a master's...?**
4. Bachelors is in music therapy and German.
5. **That's interesting, that's a new one. And do you have other degrees or just the bachelor's.**
6. Just the bachelor's, I'm thinking about going back for the master's but just the bachelor's.
7. **And where did you get your degree?**
8. \*\*\*\*.
9. **Okay. And where do you currently work?**
10. \*\*\*\*.
11. **Okay. And how old are you?**
12. 35.
13. **Okay. That is that, for those. All right so I'll jump into the actual questions now.**
14. Good cause I totally forgot what was going on here.
15. **No problem. Basically I'm looking at music and reading in general that's kind of the...if you want a place to place your thinking. What types of music interventions do you typically use to impact reading skills?**
16. Types of interventions meaning like lyric analysis that type of stuff?

17. **Sure. What do you do with music that involves reading.**
18. Well...for some reason my brain is not answering this question.
19. **That's all right.**
20. I'm trying to think of big words like lyric analysis or something and all I can think of is kids.
21. **Just tell me what you do with your clients. Don't worry about it being worded a certain way or anything.**
22. Okay well we've done books, singing books like especially like Dr. Seuss. Rhythmic books or whatever and they follow along and read with me. We've done like instruments, things are labeled in the classroom. Everything's labeled and we'll sing songs about letters, dance to letter songs. S
23. Some of the older kids we've done like lyric analysis and music writing and music reading and all that involves literacy of some sort. There's another thing I was going to say...tracking like left to right tracking kind of stuff. We do that. There's these really cool books that I have that are musical tracking books. They basically play a song and it has like a something, tactile object that you can feel and you follow along to the ups and downs of the music. It's actually really cool.
24. Jenny ?, she's the one that makes them. So we do tracking stuff, left to right, letters, song letters, singing songs. Sometimes we'll draw letters in the air or write them or braille them in our case sometimes.
25. **Okay.**
26. Does that answer that question?

**27. Absolutely! So then my next questions involves the components of reading that you target. It sounds like you, what you said earlier was literacy, tracking left to right, letter recognition. Any other areas of reading that you cover?**

28. Let's see, yes. tracking. In our school we have like pre-braille so tactile, feeling of your letters. Still letter recognition but you have pre-braille like shapes, you know? Cause I also have little kids so a lot of that is like shapes and just tracking with your fingers, not necessarily left to right but tracking shapes.

29. And then you have your letter recognition you mentioned. We do comprehension, that's part of literacy. I have some stuff where we do comprehension and understanding. Then there's writing and reading and...what other components of literacy are there?

**30. Anything like with fluency or...**

31. Fluency, I've done some fluency stuff. I haven't done a lot of that lately. But I do do fluency some of it.

**32. Okay so all of it. And do you work with letter sounds, word sounds those types of things also?**

33. Letter sounds? Oh yeah. When we do letter recognition we do letter sounds. All the time.

**34. All right. Do you specific music elements to address reading outcomes? I think you mentioned rhythm. Are there other elements of music that you use?**

35. Rhythm and shape I guess. The way it like, you know, not enunciation well enunciation too but...what's it called? What' the word for when you...the shape...
36. **Contour?**
37. No that's not the word.
38. **Form?**
39. No. like when I think of the shape like your enunciation but your ups and down...
40. **Oh like range and dynamics and accent. Kind of all of that's included.**
41. Oh that's not the word I want either.
42. **It'll come.**
43. It's a little of all that but the word I want I can't think of. It's basically like your inflection.
44. **Okay. Sure.**
45. Like how you say things.
46. **I know what you're saying now.**
47. Using musical shape xxxx xxxx xxxx to learn how to say things. Like is it a question (voice pitch goes up) or is it a statement...
48. **So almost the articulation of...**
49. Yeah.
50. **Okay. Great. How do you evaluate the efficacy of your music interventions that you use with reading?**
51. How do I evaluate? Well...it kind of depends. Like if I'm talking like with the littler kids and we're talking like...I guess the easy way to answer this question –

letter recognition type stuff. You know when you do that kind of stuff you can – either they know the letter or they don't know the letter. It's like a trial, I know the letter 4 out of 5 times. A trial, different kinds of trials.

52. Sometimes if it's more along the lines of fluency or something then it might be more the recorded. And then I guess you would have to record those types of things and then you can like have the student self-evaluate like how do you sound now? How do you sound later? Or you can break it down in something like more measurable that you can say well how many breaks in your reading did you have?
53. Their comprehension, I've done tests before. Since they're working in school I've done school tests, you know, what was Jack wearing in the story? That kind of thing.
54. Mostly, I try to do things out of trials like how many times were they able to do this but sometimes I do the self-evaluation or just observational without concrete data. So you're doing concrete data or not basically.
55. **Sometimes you can and sometimes you can't.**
56. Or a lot of times I don't.
57. **Okay. I'll shift gears just a little. Is there a predominant theoretical framework under which you apply music interventions to reading development?**
58. Ummm...you mean like such as behavioral or something?
59. **Yes.**

60. I, I tend to lean toward behavioral kinds of things. Umm...and I kind of think a lot of schools do the same so I don't know if it's the school influence...but I tend to lean towards behavioral but...
61. **Okay. And you say you lean towards it is there...do you...when you're developing your music interventions and working on that...do you purposely think behavioral or is it a product of where you work or is it a mixture?**
62. I would say I don't necessarily think behavioral when I create stuff. A lot of times I think I think more...I don't know...I don't know what I think.
63. Probably more humanistic, like holistic. I don't know I do do a lot of cause and effect.
64. **Okay.**
65. I would probably still say behavioral is probably...I don't know if I necessarily consciously think about it when I'm creating stuff but...
66. **But that's your tendency...**
67. Yeah...I, you know, it's a lot of cause and effect I think. And I think I, because the para-professionals and the teachers...it's all reward systems and cause and effect and, you know time-outs, and this and that. I think it just automatically plays into a lot of what I do.
68. **All right. Okay.**
69. I don't know if I ever really think about exactly the model I use.
70. **How often do you apply findings from research literature when you're developing interventions for reading?**
71. Say that again, how often what?

72. **How often do you apply findings from the research literature?**

73. Not very often...

74. **That's fine, a lot of people have said that...**

75. I'm like "does that make me a bad therapist that I'm not reading as much literature as I should?"

76. **No! not at all...I'm truly, this is such an exploratory study to see what people are doing cause there's not a lot written. I think some of these questions people feel like I am...how scholarly are you? I'm really not, I'm just curious. So if you don't that's fine. I'm not judging.**

77. I mean I do look at some things. I generally don't read a whole bunch. I get a lot of my info just from conferences and stuff. But I would say, I actually reading the research...not so much.

78. **Sometimes I find the conference info is more relevant and easier to apply.**

79. It is. It is.

80. **That's what a lot of us do. Those of us that are out there in the field so to speak.**

81. You get it handed to you on a platter and then you can just take the information and roll versus, you know, a journal or something, you have to purposely sit down and read it and it's not always like the most exciting thing to read. Then you have to apply it if you can apply it. And a lot of times you can't cause it's other stuff. So I think it's just that time thing. A lot of us just don't have time.

82. **Sure.**

83. Not a bad thing.

84. **No not at all. All right and then...this is my last question believe it or not. If you could, describe what has influenced you professionally to address reading skills in your music therapy practice.**

85. What influenced me...professionally...address reading skills...good question!

86. **Thank you!**

87. I don't know...ummm...huh...let's see...I mean I guess influenced me to address reading skills would probably be the fact that I work in a school. Because that's kind of important and it's what people need to be doing. But I would say, I don't really, just because I work in a school to influence me...I don't feel is like – what do I feel has influenced me in a positive way.

88. I think probably music braille. Because I do a lot of music braille teaching and transcription and...I feel that I like to correlate music braille to music literacy to print literacy or braille literacy because it correlates. Like if you can learn to read braille music you can learn to read literary braille or vice versa. And it just improves, that's where part of that fluency comes in, it improves that flow and fluency when I'm doing music braille.

89. **Okay.**

90. So I think personally more than professionally that's probably where that influence comes. I'd say, I really like to correlate the two but I'd say it all stems from having been working in the school.

91. **Sure...and that's the expectation and the need there.**

92. **Okay. Great. Well that was excellent. Did you have anything, any questions you wanted to ask me or anything you wanted to add? Any comments?**

93. No...I think I'm good. I think...I appreciate your patience with my, you know,  
lack of response in the last month.

94. **Not a problem.**

Appendix K  
Subject 8 Transcript

1. Subject 8 – review interview
2. **So we can just kind of have a conversation. I'll just go through the questions and tell you what my notes say and let you fill in if there's any blanks.**
3. **So the first question was regarding types of music interventions you used to impact reading skills. And you, what I have written down are books to song, I think you said predictable readers?**
4. Predictable patterns, that's actually a type of book. (cuts out) those kinds of books that's what I'm talking about.
5. **Gotcha...and you said that you often write your own songs to go with whatever project you're working on....you use nursery rhymes, you use songs with repetitive patterns, and I have written down "seeing the written word" so I'm guessing following along in the books.**
6. Yeah. (cuts out)
7. **Seeing the written word – "seeing" you would have them follow along in the book or you use, cue cards or something?**
8. Oh yeah.
9. *(phone interference not heard on recording, call was ended and subject redialed)*
10. whatever's going on they don't want you to talk to me (laughs)
11. **so anyway – we were talking about music interventions that you use so books, writing songs, nursery rhymes, anything else?**
12. I use popular songs that the kids might know. I print them out and we use them for, we sing the songs, that's probably where you got the sing the written word. We sing the songs so that they make a connection between what they're singing

and what's going on. So that's where you got that from. That's, songs from musicals or pieces of popular songs that they may know things like that. I use those for reading also.

13. **And we talked about the reading, the components of reading that you target which depended on the students. Some of them that I have written down are: vocabulary, familiarity with the printed words, beginning phonetic skills and comprehension. Is there anything else that jumps to mind.**

14. The other thing I do a lot of times with popular songs is tracking from left to right.

15. **That's actually come up a lot so that's kind of cool.**

16. Tracking left to right...and then I like with vocabulary words with some of those songs, you know several words appear more than one time and so we may highlight them or circle them or...do various things.

17. But I've found...there's...well years ago there was a thing called the "singing reading connection" I don't know if the lady still does anything. But she, her philosophy was if you can sing it you can read it. Because it's just a matter of knowing what it is that you're singing. Making that connection with what's on the printed page. And so if I find the kids singing something, even if it doesn't make sense to anybody else, I print it out and we use it as one of those things.

18. **Very good. All right and then we talked about, my next question or group of questions, talked about using specific music elements to address reading outcomes. Which I think you mentioned, especially when you're looking at beginning skills. And you said rhythm, guitar and piano. You did talk about**

**the popular songs here to as well. Was there any other music elements that you think you incorporate on a regular basis. Maybe more so than the others or that stand out to you?**

19. When I'm doing reading? Okay let me think a second. I know I do reading because we do syllable and rhythms cause we do syllable and those kind of things. We do some things with fluency...we do some things with... .. okay now that's math when I do note values.
20. (pause for thinking) trying to think what else. I guess melody and intonation, the up and down.
21. **Okay.**
22. Because you know, I want the kids to, when they're reading to not just be monotone so we have to, we do some things with, that would be an element of melody.
23. You know I just haven't really, I don't always stop and break it down unless I'm trying to talk to a parent then I tell them all this stuff. But I just think, than it all just sort of flows. And I do some stuff with melody I do some stuff with rhythm I do some stuff with timbre. And fluency I think probably more than any of the others that I use. I use the other elements of music when I'm doing reading I don't do as much harmony but, but I use the others but I think those are probably the ones I use the most.
24. **Okay. And then we talked about the evaluation of music with reading and again that depends on so many factors. But you talked about observing if the work more quickly with some activities than others or if they ask for**

25. Start again I missed that.
26. **Okay. Evaluating – the efficacy of your interventions.**
27. Okay – how do I know when they're okay?
28. **Yeah – how do you know when they're working or how do you tell for yourself. And largely you said that by observation because it depends on the student a lot and then what they're working on. And in particular I think, if they ask for a task or an activity again that sort of let's you know that that's working for them. Does that sound right? Any other ways you evaluate?**
29. Well...indirect evaluation is the observation or comments from other co-workers because, you know I will do a particular skill with the student and then they go to speech and sometimes just out of the blue they'll start to do it. You know how they just, you just never know. They'll start to do something and then, you know they'll come back and say "Charlie did such and such in my class today" and I guess "he did what?" and then "yeah we did that." Or there are times when they will transfer and do it with the teacher in addition to doing it with me. So I know that they're getting...at least part of the skill. So that's more of an indirect evaluation than the other. Those comments that come back, a lot of times will help me know we're in the right direction.
30. **Okay. Excellent. And then we moved on and we talked a little about theoretical framework we use. And you talked about, I remember, of course you've been in this field awhile and you kind of use everything. There really wasn't one in particular that you relied on, but that you in fact I have a quote here: "I'm locked in to what works." Which I thought was a great quote.**

31. Well I do. The thing is when I really stop and think about what I do, I do bits and pieces of all of it.
32. **Right.**
33. You know depending on the client. Not all clients work well with neurological model. Some of them do, it's a perfect thing, it's a good model it's a good way to have select strategies but, just like anything, their not cookie cutters. So you can't lock them in. so you've got to have more tricks up your sleeve than just a particular model. Cause if that one doesn't work you've got to find something else. And so I tend to, I just go onto my bag of cookies and pull out what comes out.
34. **Exactly. All right. And then we talked a little about research and the literature and you said you try to read the new journals and kind of keep up on things in that realm. Is there any in particular that you...**
35. Research wise? It depends on who I'm working with at the time, what I go looking for. When I had students or clients that were
36. *Call dropped, subject was redialed)*
37. What population I'm working with at the time. I go back, I really go back and review whatever literature is there. Because there's some that I haven't worked with in awhile. And so, and then a review of the literature is talking to co-workers or other therapists, those kinds of things is what I use the research for. More so than anything else...that's what I use the research. I don't want to do research. I personally don't want to be doing it but I like to read what other people have done.

38. **Sure, sure. and then the last section was just talking about your influences.**

**What influenced professionally to address reading skills. And you mentioned primarily your other co-workers, collaborating with speech therapist and assisted technology folks in the school system. So anything else there that's been an influence in this direction for your practice?**

39. Umm...parents. You know – questions from parents like could my child do this or I'd like for my child to be able to do specific kind of things you know...read a card to grandpa or something. A simple request like that you try to, if at all possible, incorporate it into what you're working on. But I guess my biggest reason that I got into those kinds of skills was questions from those co-workers that hear.

40. **Excellent. All right we made it!**

Appendix L  
Subject 9 Transcript

1. Subject 9 – review interview
2. **All I needed to do is just kind of go through and review all your answers and get it recorded and make sure I have all your information. I'm just going to start with the first thing we talked about was the music interventions you used for reading.**
3. Yes.
4. **What I have written down is: you use singable books, original songs for concepts and sequencing of song.**
5. yes,
6. **Can you tell me a little about sequencing of songs and what you mean by that?**
7. Yes. so, I might do a song that has...usually three sections so...
8. *Recording experienced significant distortion to the point where taking accurate transcription of the majority of the subject's responses is impossible.*

Appendix M  
Subject 10 Transcript

1. Subject 10
2. PART 1
3. **Okay, had to make sure I had my recording up and running. I had a couple calls that didn't get recorded but I think we're good.**
4. **Did you get everything taken care of last night? I know you said you had an emergency.**
5. I did. Thank you so much. You know how certain times, it always pops up at times when it's not convenient. It's always the way it works!
6. **Absolutely. That's why we are flexible.**
7. That's right, but no everything's fine, thanks for asking.
8. **Good...well let me get started here so that you can get on with whatever it is that you need to do. I'm going to start with a little bit of demographic information, just a couple, and then I'll jump into the actual interview questions.**
9. tell me again what university you're with Cindy.
10. **Pardon me? What I'm working on?**
11. Tell me again what university you're with?
12. **Oh – Western. Western Michigan University. In Kalamazoo Michigan.**
13. Oh, okay great! Terrific. I have a dear friend from Michigan so that's great.
14. **So tell me about your, what degree or degrees you have and where you went to school**
15. Okay I have both BS and an MA in music therapy and they are both from \*\*\*\*.
16. **And where do you currently work?**

17. I am in private practice and have been since 1987.

18. **Oh fantastic!**

19. Yeah – I like my job just a bit.

20. **Sounds like it. That’s always good it makes it better when you enjoy what you’re doing.**

21. It certainly does.

22. **And how old are you D\_\_\_\_\_?**

23. How old am I. oh I just turned 60.

24. **All right that ‘s the demographic information.**

25. **My first question then: what types of music interventions do you typically use to impact reading skills?**

26. ***PART 2(continued above question after call was dropped)***

27. You know this is such a hard question to answer. When I saw what you were asking I thought “oh boy” cause it varies so much. I have, my private practice, and even when I was contracting with area ISD’s the population of children varied so very much as you know. Most of the folks that I work with have some sort of IDD, many of them are on the autism spectrum. But they vary in terms of their...you know cognitive level. So it really does depend on the kiddo.

28. Sometimes I have, for example, PECS (picture exchange system) where I have put the word with the picture of the object or the instrument for example. And after awhile I will extinguish the picture and just give them the words to try to let them know they need to be looking at those squiggles and lines and finding out that those squiggles and lines when you put them together mean this word or that

word. And that has been quite effective actually. Particularly with my folks on the autism spectrum.

- 29.** I also use a lot of worksheets where we literally do things to music. I sing the worksheets but they're literally things for their learning – how to put letters together or the...the beginning letters like 'cat,' 'bat,' 'hat,' 'fat,' you know what I'm talking about. And then we of course sing about them. To help them retain the information. That has also been very, very effective with a lot of my folks.
- 30.** For some reason, my guys that are dual diagnosed with Down's and autism really seem to benefit from these worksheets that are sung. Where they're changing one letter. It seems to, the rhyming part of it seems to kick in quite well.
- 31.** I have tried to use some reading systems but of course they're always have to be adapted and modified a great deal. So to be honest I have ended up using or adapting my own materials that I just had here. And I will say that a lot of my folks, too, just from rote reading, learn how to read. In other words, I will do song picture books where we are singing, you know, "I've Been Working on the Railroad" for example. But we're doing it with the picture book and they learn from me pointing or having them point to the words as we sing, what those words mean. And then we try to expand and generalize from there.
- 32.** And once again I find music stimulus very helpful in all of those...different...worksheets or...introductions that I have done to letters and reading and writing. I find the music stimulus to be extremely helpful in terms of reinforcing, but not only reinforcing but helping them to gain the concept.

**33. Excellent. Okay great. Now you mentioned a couple of components of reading, I think you talked about letter and word recognition. What, are there other components of reading that you typically target? I'm sure that's varied as well but in general...**

**34.** It's quite varied. In fact I have a young woman who is blind and on the autism spectrum, and she reads and writes braille incredibly well. But to start that I think her VI instructors really did the same thing. They taught her the letters and then taught her what they look like in braille and then how to put them together. By the time I got her, they were wanting me to work on the different parts of the sentence. So once again, we sang a song about the different parts of the sentence. And what they did, like you know nouns is a person, place or thing. And made up a song to go with those. She learned all of those and then I would ask her VI instructors to braille different examples of those parts of the sentence. And she would have to draw from each of those columns and put sentences together for me, if that makes sense. And because of that her reading did, it did help her reading. Although they were doing an incredible job too, but I think all of it together was really, really helpful.

**35.** And her writing, putting words together. But it also helped her socially because she had to think about 'how do I put these words together' and 'how do I...if I want to tell someone how I'm doing' or 'if I want to tell someone how I did at school today how in the world do I do that?' So it was...because she is this huge, big musical being it was very important and very impactful for her to learn most

concepts, frankly, through music in addition to the other ways in which they are addressing any concepts including reading. Does that make sense?

**36. Yes it does.**

**37.** Okay. It really helped her get it. That's why I said the VI instructors asked me.

Other times it was the speech therapist or another time it was the PTs who said 'when you're working on piano do this' because that is her way of organizing the world. That is her way of understanding what goes on.

**38. Right.**

**39.** So I had to get clever.

**40. Sounds like it.**

**41. Do you use specific music elements to address reading outcomes and how do you go about crafting those interventions with those music elements?**

**42.** Once again, I feel like I'm not being helpful to you Cindy, because it really does, as you know, it depends on the kiddo in front of me. I really do try to take into consideration...the style preference of that particular child. The sensory needs. Is it something where they need to be calm in order to learn this concept. Or is it something where it needs to be peppy and something motivational for them to learn this concept.

**43.** Does it come easier to them when I give them the information quickly. In other words of the tempo is pretty, pretty snappy. Or does it help them process it if the tempo is a little bit slower where they can really think about each words that I'm singing. So once again for the sake of your survey, I'd love to be able to tell you a

particular formula that has worked for me. But it really does depend on that person in front of me. I'm sorry...

**44. Oh no that's perfectly fine. Because that's... one of the reason that we went this route with the study was because there really isn't anything written, at least not that I could find. Rather than doing a simple survey, because we weren't sure the people were even going to talk about it the same way; we decided to interview so we could find out how...how do people look at this. So that's perfect to have that description of it.**

45. Okay. Great.

**46. That helps, very helpful. All right. How do you evaluate the efficacy of your music interventions designed to impact reading?**

47. I do a lot of data taking. Obviously I do try, when I feel like it's appropriate to get the parents involved so that we may have a list of four color words – for example – that we're working on having them read. And I will ask them when they are reading themselves, the newspaper or whatever it is that they're reading, to point it out to the child and have them see it in a lot of different contexts. So it's not just rote reading, what they see in that particular visual aide or that book, song, picture book that I happen to be using.

48. I want them to try to be able to pick it out...in other instances. And this also, this sounds strange Cindy, but in a lot of cases it's almost backwards with a lot of my students. They do this rote reading first rather than actually learn the letters first.

49. It's strange, they seem to find the context of the words as a gestalt first and then we break it down into the letters. That's not always true but that does seem to happen quite often. Does that answer your question?
50. **Yes, absolutely. Let's move on...is there a predominant theoretical framework under which you apply music interventions to reading development?**
51. Well that's an interesting question. I'm not sure how to answer that. My knee jerk response was, it's probably mostly a behavioral approach or cognitive therapy approach because we're talking about a concept here. But I have to be honest with you that's not always the case.
52. For example, with A. \_\_\_ the young lady I was talking about earlier who is blind and on the autism spectrum, many times we end up improvising music and then taking the concepts, pulling the concepts into the improvised music. In which case it's really more of a Nordoff-Robbins or an improvisational approach to the same learning.
53. **Okay.**
54. So once again I'm a big help, Cindy. But my population is so varied.
55. **Well and that tends to be with the age group and the academic/reading...across the board like that.**
56. It really is, and my diagnoses, there really is everything you can imagine. I even have a young man who is a left hemispheric xxx. So you can imagine for him, he literally is right-brained. And he wasn't supposed to talk and he wasn't supposed to read and he wasn't supposed to do this or that. Well he is reading, particularly

words that he for example – color words he absolutely knows the initial consonant. So even if he doesn't know that “g-r-e-e-n” spells ‘green’ even though we may spell it together out loud in the song. When I ask him to pick it from other words, he knows that that one that starts with G is green. Now when we start working on Grey and other things like that it may get a lot trickier for him. But right now, he really does have that concept and the guy doesn't even have that left hemisphere that's supposed to figure out that logic.

**57. Interesting.**

**58.** So you know, some of my folks are just...I'm literally pulling it out of the air to see what works. Cause there aren't many people like him, frankly, in the United States. So there was nothing there for me to say “here's my framework” so I'm having to make it up as I go along. But the good news is, it seems to be working.

**59. That's always good news. Very good.**

**60.** I don't know if I answered your question Cindy, you asked me how I evaluate. I really do take data and I also take, the reason I was telling you about the home programming. Is that I also take information from the parents if they fell like they can see at home that the child has generalized some information that we have been working on. I also evaluate if I can, have them read, just as we were talking about earlier. If they're able to read the same words that I'm concentrating on in several different formats. Then I can pretty much determine, they really do know that word is ‘red.’ Because I've shown them in different books, I've written it down on an erase board, I have asked them to put the missing letter, I have you

know all of these things. And if they can do all of those, I pretty much assume that they've got that one.

**61. They understand that concept.**

**62.** Yes, they understand it. That's right. So that's what I mean by data taking. I really sort of do it in a lot of different ways and then record the different mediums in which they have identified it for me.

**63. Excellent.**

**64.** Now you understand, and I know you do being a music therapist, this is all done in lickety-split time. So I don't know that I can tell you that it is always totally accurate. If I had a team of 10 that were helping me take data it would be I'm sure much more accurate and much more broad in terms of the kind of significance that it would have. But I'm doing the best I can here with my two hands and sometimes just one hand cause the other one is on the kiddo so they're not flying all around the room.

**65. Exactly. Okay – how often do you apply findings from the research literature when developing your music interventions?**

**66.** You know, I'm embarrassed to say that I think I applied the research more earlier on than I have perhaps in the last 10 years. And that doesn't speak very well for me. But I think partly it's because I did kind of happen on to strategies and techniques that seemed to be working very well for the folks in my clientele.

**67.** Now does that mean that they're the best interventions that I could be using. No, I can't tell you for sure that they are. Cause I don't know that I have looked quite honestly, and probably about the last...oh probably 5 years I should say. Because

I was, I didn't leave the school district until about a year ago. And so until then the teachers were great about sort of keeping, because they know I was that this was an area of interest for me. So they were keeping me up on different reading programs that they were using in the classroom itself. But also others that they were reading about. But once again as we talked about earlier, Cindy, that even with the good reading programs they're almost always geared towards folks that are in mainstream classrooms so they are always going to require some adaptation or modification when they are being used with my particular population.

**68. Right, right. Okay thank you. And then my last question here is to ask you to briefly describe what has influenced you professionally to address reading skills in your music therapy practice.**

**69.** A number of things. One thing, reading to me is power so if there was any possibility that the folks that I worked with could read I wanted to give them that opportunity. But also many parents would love for their child to be able to read and I don't care what level they are, Cindy, it's one of their same wishes. Just like any parent with a child or any of us that work with children who would love to see them all be able to just pick up a book and have the independence to read and get knowledge. And so it's no wonder that over the 26 years that one of the biggest things parents mention to me, when I ask them what would they like the child to gain from music therapy, one of the things they often mention is they would love for them to be able to read. So my feeling responsible to the families that I work with is one of the reasons.

70. The other reason is too I have had classroom teachers, as I have mentioned special education teachers in whose classes I have contracted as a music therapist and other therapists in other therapeutic disciplines who have come up to me and said 'would you just try introducing reading' or 'would you reinforce what we are trying to do in this setting.'" And then, in fact, in my school district they had reading specialists who would often talk to me about 'how would you as a music therapist introduce this concept to these kiddos that process this information quite differently?'

71. So you could imagine over the years all of these demands plus my own sort of passion for this kind of thing has made it an area of real interest for me. So that's why I said 'bless your heart' when you asked what sort of material I used. They just vary so much because it is something that really interests me so I'm always kind of picking something off the shelf and thinking what can I use this for, how can I adapt this or modify it that might be useful?

**72. Excellent. Very good. Well it has been very helpful**

73. I hope so.

**74. Glad we got to connect finally.**

75. Me too Cindy and I sure hope it helps. I feel like my answers are pretty broad but that maybe what you get.

**76. I think – in general they're following the line and the theme of what everyone else has said.**

77. Okay good.

**78. In many respects. So please feel like your answers are certainly good.**

79. Well and you know that's good to know isn't it? I think it's comforting when we talk to other folks in our field and find out that we're all kind of in the same boat. The good news is I do feel like there is some success happening and that's always, of course, the bottom line of what we're wanting.

80. **All right, well if you have no other questions or comments for me I will let you go.**

Appendix N  
Subject 11 Transcript

1. Subject #11
2. **Where are you working?**
3. Well, I'm working for \*\*\*\* and then through \*\*\*\* I have contracts with \*\*\*\*
4. **What is \*\*\*\*?**
5. \*\*\*\* is like an agency. I think the full name is, well it used to be \*\*\*\*. Now I think they changed it to \*\*\*\*. It's an agency that has, there's music therapy, art therapy, we have dance, drama, ice-skating, we used to have gymnastics. You know it kind of just depends on who is working that's qualified to teach different things. And there's an onsite thing where we do, work with individuals and then there's several off site contracts.
6. **Excellent. I have a couple just basic information questions to ask and then I'll jump into the...you have a bachelor's degree?**
7. I have a bachelor's of music therapy.
8. **And do you have a master's?**
9. I have a master's of education. With...concentration in Early Childhood.
10. **Okay. And then where did you get your music therapy degree?**
11. Music therapy was from \*\*\*\*.
12. **All right. I'm going to jump into the question and just answer them as best you can. This is a very much exploratory study, just to kind of see what people are doing and see if there is any common language and commonality between us so...so the first question are what types of music interventions do you typically use to impact reading skills?**

13. Okay...in general you know a lot of singing, instrument playing, movement.  
Some listening but not as much because I have more lower functioning kids. And then...do you want specifics interventions?
14. **Sure.**
15. That's kind of what you want...okay...so it depends on what kind of – you know obviously what kinds of goals we're working on but especially like at the preliminary level with the pre-lit skills we do a lot of movement with directionality so you know, up and down, and left and right.
16. I do a lot with sequencing, I do a lot with letter sounds where they're either listening or they're matching things or they're just becoming aware. You know 'this is what the letter b sounds like' or whatever letter we're working on.
17. A lot, especially at the preliminary stage, we do a lot of matching and shapes just to get them, you know being able to recognize different, different shapes and things like that. Name recognition, either recognizing their name in print or...recognizing the first letter of their name. so to kind of sneak that in I'll use it as a way to put instruments away.
18. It will be like 'whose name looks like this' and then whoever's name that is gets to come and put their instrument away or something. So it's a nice way to kind of sneak it in and I can do it a lot.
19. I do, with the students, I do a lot of...I don't know, I call them song sheets. I use board maker and I adapt and I have the pictures with the words to go with songs. And so, depending on what level they're at either it's just even tracking left to right or just even you know holding the notebook and turning the pages when

they're supposed to turn the pages. And then for the older, higher functioning it's more like to help with fluency and those kinds of reading skills.

20. We do a lot with... songs that spell words. To get to work on spelling and to work on letter recognition. So a lot of times with that...like I did a whole series...with a couple of my classes with...spelling the months of the year. So then each student would get a card that has the month on it and then we would take turns. We would sing the song and the song had, you know whatever facts about the month, and then each child would have a chance to spell the word, you know, into the microphone.

21. **Okay.**

22. ... Oh I do have a...with books...and again just...exposing them to books and different settings and then depending on the class we do, like, I'll adapt the books so I'll put (I know people get upset – “you put Velcro in your book”), so then they'll come and they'll have a part, something that's pertinent to the story or the song and they come and match up with the book. We'll do a lot of like, when the book is finished like, working on reading comprehension – okay “what happened in that book?” Or we'll do the predicting, like you know...I don't know “well what do think is going to happen next?” in the book kind of thing.

23. What else do we do...adapted notation. To work on some of the just, just getting them used to symbolic representation. So just starting to understand that this symbol means something else.

24. **Right.**

25. You know just like letters and words mean something else. So sometimes that's really simple like an actual picture of you know the maracas when the maracas are supposed to play. But sometimes it's more, you know like, whatever...three x's if we're supposed to play three times or, you know, just depending on their level. I guess that's...I'm sure there's more but...
26. **Right! No that's fine. So let me just recap and make sure, cause I'm taking notes as well...umm...your general music interventions use singing, instruments, and movement. And then it sounds like a lot of the reading components that you target...let's see if I've got...print recognition, letter sounds, fluency you mentioned, matching...you mentioned reading comprehension, predicting...did I leave anything out? Sequencing...**
27. Sequencing, directionality.
28. **Directionality, yes I've got that. Because my next question was what components of reading do you typically target and you kind of combined them in a single piece, which most people have done because I think that's how we operate. That's what I've learned...**
29. Right, right.
30. **So I just want to make sure...are there any other components of reading that you think you work on. I mean that's a lot so...**
31. ...you said letter, you said letter sounds and letter recognition – you said both of those right?
32. **Yes. right.**
33. No I think that pretty much...covers it.

34. **Okay. Excellent. Do you use specific music elements to address specific reading outcomes? And by elements I mean like rhythm, form, meter, melody etc.**

35. Yes?! that's the short answer.

36. **And...can you tell me why or how you use that element most often?**

37. That gets a little more...well...I mean just sort of the typical things. Like if you're...asking a question, you know, ending it on a 5/7 or something so that you've got the tension so it needs the resolution. To resolve it...definitely using a lot of rhythm and tempo to...what's the right word I want...encourage responses from students. Especially like with the spelling like when we were doing the months. I tried to do a monthly piggy back song you could also use them but it was tricky because sometimes, you know, the emphasis goes on the wrong syllable. So it was really tricky finding songs that would...put the emphasis so that it sounded like, so that it sounds natural. So it wasn't like s-e-P-t-e-m-b-E-r because nobody's, you know, nobody's going to learn how to spell that way. That's not how you think it in your head.

38. I guess those would be the main...

39. **Okay. That's great. All right...I'm going to shift gears just a little bit here.**

40. Okay.

41. **Sort of...how do you evaluate the efficacy of your interventions that you design for reading?**

42. Well...it depends on what the goal is and what the objectives are but...so, you know I'll kind of gather up, you know a baseline by talking to the teacher, by

doing my own assessment and then...you know and then deciding, you know, putting together the objectives working towards whatever goal we're working on. And then...you know so if it's...letter recognition and we're doing it through spelling months of the year then you know then I will just track that. You know this week they got 6 out of the 9 letter correct or you know...

43. **Right.**

44. You know that kind of thing.

45. **Okay. Great. All right...is there a predominant theoretical framework under which you apply music interventions to reading development?**

46. Say that one more time cause there was xxx xxx

47. **That's all right – is there a theoretical framework under which you apply music interventions for reading?**

48. Well my theoretical slant is more towards humanistic/improvisational. I don't use total improv improv...but I try to be, to be able to be spontaneous and be in the moment. To kind of go with them and meet them where they are and work from there.

49. **All right. How often do you apply findings from the research literature when you're developing music interventions for reading?**

50. Say that one more time.

51. **How often do you apply findings from the research literature when you're developing music interventions for reading?**

52. ...let's say...frequently...I don't know. I'm not exactly sure how to answer that. I do try to keep up with what's current, you know, not just in music therapy. But

literacy is actually an interest area of mine so I do try to read things about literacy that aren't music therapy related – you know what I mean? And then see how I can apply that into the music stuff, music therapy things. Or talking with teachers and a lot of times they'll suggest articles and say "have you seen this"

**53. So you do it sounds like a lot of actual work in literacy and reading in literacy to keep up with that.**

54. I try to, I do.

**55. Excellent. All right and then my last section here, my last question. If you could please briefly describe what has influenced you professionally to address reading skills in your music therapy practice?**

56. What has...

**57. What has influenced you professionally, to do this, to work with reading.**

**Examples might include you know, reading research or any clinical training, where you work, books that you've read, conferences. What's kind of inspired you to work on reading with your students, with your clients.**

58. When I was doing my Master's in Early Childhood...I knew, you know, that eventually there was going to be a thesis coming up. And I saw, you know, just doing research for other things, it just seemed like I saw a lot of stuff that was music and literacy related. And I thought 'oh that's interesting' and then the more that I started like, getting into it...I just feel like it's such a...such an important foundation for our kids. Because really, well for any student really, because you can't, you really need it pretty much in every class. I mean even if you're in math class and you've got a story problem, if you can't read and comprehend the story

problem, you can't do math. Or you can't, you know – history, you have to read the history. Social studies – I mean it's all about reading so...I felt like that was a...just an area that was like a really great foundation and heaven knows that many of our students with special needs need as much of a strong foundation as they can cause they have so many other problems.

59. So I felt like that will be a great way to, to really help them be able to succeed, you know, in their education goals. And then of course the more that I started to looking at it. The more I'm like "wow, this is really cool" there's so much...research and all this stuff about the brain, and all this stuff about- you know- just everything. I think it's...an area definitely that's...growing and growing.

60. **All right – okay well those are all my questions. Is there any questions you have for me, anything else you wanted to ask before I let you go.**

61. No...just that I was really super happy to hear that you were doing this. Cause like I said it's an area of interest for me.

Appendix O  
Summary of Subject Answers

| Subject | Survey Question 1   | Survey Question 2  | Survey Question 3  |
|---------|---|--|--|
| 1       | Singing with visuals<br>Instruments with letters on them<br>Singing books<br>Original songs   | Letter recognition<br>Vocabulary words<br>Word recognition<br>Spelling<br>Rhyming words<br>Reading comprehension<br>Synonyms<br>Antonyms                         | Lyrics<br>Lyrical sentences<br>Popular songs                   |
| 2       | Hello and good-bye songs with visuals<br>Tone chimes with words divided according to chords   | Left to right tracking<br>Letter recognition<br>Letter sounds  | no   |
| 3       | Songs<br>Fill in the blank songs<br>Original songs to fit goals   | Rhyming words<br>Spelling<br>Phonics   | Rhythm<br>Lyrics   |
| 4       | Sing books<br>Familiar songs, also teach parents to use at home<br>Songs  | Pre-reading skills<br>Sound production<br>1:1 correspondence<br>Letter identification  | Tension/resolution<br>Repeated rhythm<br>melody                |
| 5       | Songs with books and visuals  | Letter recognition<br>Letter sounds<br>Word recognition  | Rhythm<br>Tempo<br>Articulation<br>Pitch<br>Dynamics           |
| 6       | Song books  | Letter identification<br>Visual tracking<br>Word identification<br>Spelling<br>Word/letter sounds  | Rhythm   |
| 7       | Singing books<br>Labeled instruments<br>Dance to letter songs<br>Lyric analysis<br>Music writing<br>Music reading<br>Rhythmic books<br>Musical tracking books | Literacy<br>Tracking left to right<br>Letter recognition<br>Pre-braille tactile<br>Tracking shapes<br>Comprehension<br>Understanding<br>Writing<br>Letter sounds | Rhythm<br>Shape<br>Inflection<br>Musical shape<br>articulation |

| Subject | Survey Question 1   | Survey Question 2  | Survey Question 3  |
|---------|---|--|--|
| 8       | Books to song<br>Create original songs<br>Repetitive patterns<br>Song writing<br>Nursery rhymes | Vocabulary<br>Print familiarity<br>Beginning phonetics<br>Comprehension<br>Tracking<br>Syllables   | Rhythm<br>Matching sounds to concepts<br>Popular songs     |
| 9       | Singable books<br>Sequencing of songs<br>Original songs for concepts                            | Sequencing<br>Inference<br>Basic comprehension<br>Blending<br>Rhyming  | Rhythm<br>Repetition and patterns<br>Filling in the blanks |
| 10      | Songs<br>Singing worksheets<br>Picture books  | Letters<br>Words<br>Sentences  | Style<br>Genre<br>tempo                                    |
| 11      | Singing<br>Instruments<br>Movement<br>Song sheets<br>Adapted notation                           | Pre-lit<br>Directionality<br>Sequencing<br>Letter sounds<br>Letter recognition<br>Tracking left to right<br>Matching<br>Print recognition<br>Name recognition<br>Fluency | Tension/resolution<br>Rhythm<br>Tempo                      |

| Subject | Survey Question 4   | Survey Question 5  | Survey Questions 6&7   |
|---------|---|--|--|
| 1       | Student respond to a pause<br>Familiarity for students                        | Counting correct responses<br>Observation of progress<br>Observation of engagement             | Not sure<br>Child-centered<br>Improvisation<br>Use as often as possible  |
| 2       | Bring in music after the written word – doesn't design interventions that way | "on the spot" evaluation   | Asked for examples first<br>Sight words<br>Modeling<br>Trial and error<br>More of a background thought   |
| 3       | Often   | Informal<br>Observation<br>Take data on IEP goals if any                                       | Yes<br>Behaviorist<br>Learned in school<br>Just part of the therapist  |
| 4       |   | Count successful trials<br>Parent report of progress   | Yes<br>Behavioral<br>Helps structure tasks<br>Always use   |
| 5       |   | Observation of progress  | No<br>Use phonics and sight words but doesn't follow a specific approach   |
| 6       | Uses most of the time   | Counting successful trials<br>Counting number of prompts                                       | Not sure<br>Sensory approach<br>Sensory first, adds in academics when client is in a good state of arousal   |
| 7       | Use throughout  | Counting successful trials<br>Student self-evaluation using recordings<br>Tests<br>Observation | Lean toward behavioral<br>Humanistic<br>Holistic<br>School is behavioral<br>Background is behavioral<br>Doesn't consciously apply but flows from environment |

| Subject | Survey Question 4                                  | Survey Question 5  | Survey Questions 6&7  |
|---------|--|--|---|
| 8       | Especially with beginning skills                   | Depends<br>Rate of skill development<br>Preference and request of students | "I have no clue!"<br>instinct<br>use what works<br>"I'm locked into what works!"  |
| 9       |  | Informal assessment<br>Check with teachers                                 | Behavioral<br>60-70% of the time  |
| 10      | No particular formula<br>Individualized to student | Data collecting<br>Observe positive changes<br>Parent report               | Probably behavioral or<br>cognitive therapy<br>Improvisation<br>Nordoff-Robbins<br>Always aware<br>Use what works<br>No single approach |
| 11      | Encourage responses                                | Take a baseline<br>Number of correct trials                                | Improvisation<br>Humanistic<br>Use most of the time<br>Try to stay spontaneous  |

| Subject | Survey Question 9  | Survey Question 10  | Other comments  |
|---------|--|---|---|
| 1       | No<br>Not time at this point<br>Self-study                       | Being in the school district<br>Classroom support<br>Support teacher goals  | Notes music's effectiveness in increasing attention so students are able to learn more                                  |
| 2       | No<br>Maybe in the past  | Increased awareness due to working with kindergarten readiness<br>Daughter is a kindergarten teacher                                |   |
| 3       | Some but not intentional<br>Fresh from school so remembers a lot | IEP goals<br>Teacher/classroom needs and support  |   |
| 4       | Usually seek out research when finding a difficult problem       | Clinical training<br>Minor in speech and language pathology<br>Experience with therapist's own children                             |   |
| 5       | Yes and often<br>Tries to keep up with journals and education    | Working in a school<br>Student needs<br>Teacher directed goals  | Mentioned reference to reading music as a possible area that might be related to this study<br>Pairs words with visuals |
| 6       | Not specifically for reading                                     | Peer supervision<br>Influence of other therapists<br>Parent input on goals and objectives<br>Availability of resources at agency    | Also mentioned the importance of visual and sensory aides   |
| 7       | No<br>Attends conferences  | Work in a school<br>Working with musical braille<br>Correlation between musical braille/print braille/music literacy/print literacy |   |

| Subject | Survey Question 9  | Survey Question 10  | Other comments  |
|---------|--|---|---|
| 8       | Keep up with it<br>Read journals<br>Review strategies/skills | Co-workers<br>Speech, assistive technology<br>collaboration   | *Initial recording didn't work, subject was re-called and responses reviewed<br>great comments regarding talking about using music for academic goals and how to get recognition<br>Also mentioned interactive songs-pictures   |
| 9       | Not as up to date<br>No time to devote                       | Degree in Special Ed<br>Teach reading in the classroom<br>Importance of reading skills  | *Initial recording didn't work, subject was re-called and responses reviewed however 2 <sup>nd</sup> recording was corrupted at the server. Responses are included from notes taken during initial interview<br>States that music is motivating but she uses primarily for the organization and structure it provides when working on the skills of reading |
| 10      | Not as often recently as in the last 5 years                 | Desire and passion for reading<br>Parent requests<br>Teachers and other therapists asking for assistance or requesting therapist to work on reading         |   |
| 11      | Frequently<br>Reads a lot in literacy                        | In Master's program saw the connection between music and literacy when preparing thesis<br>Important area for student success<br>Interest in brain research |   |

Appendix P  
HSIRB Approval Letter

Date: May 28, 2014

To: Ed Roth, Principal Investigator  
Cynthia Cross, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 14-05-16

This letter will serve as confirmation that your research project titled “A Survey of Music Therapists' Use of Music to Facilitate Reading Development in Children” has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., ***you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study.”*** Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

**Reapproval of the project is required if it extends beyond the termination date stated below.**

The Board wishes you success in the pursuit of your research goals.

**Approval Termination: May 27, 2015**