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Music and Literacy: Current Trends and Common Approaches of Music Therapists in Early Childhood and School Settings

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MUSIC AND LITERACY: CURRENT TRENDS AND COMMON APPROACHES OF
MUSIC THERAPISTS IN EARLY CHILDHOOD AND SCHOOL SETTINGS

by

Julie A. Palmieri

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MUSIC AND LITERACY: CURRENT TRENDS AND COMMON APPROACHES OF MUSIC THERAPISTS IN EARLY CHILDHOOD AND SCHOOL SETTINGS

Julie A. Palmieri, M.M.

Western Michigan University, 2008

Reading and writing is the key to all learning, and providing children with effective literacy practices is one of the primary goals of educational systems. The purpose of this study was to identify the current trends and common approaches of professional music therapists who incorporate literacy learning into their practice. A total of 192 participants responded and completed the survey entitled *Music and Literacy: Current trends and common approaches of music therapists*. The study investigated if music therapists address the specific areas of literacy (vocabulary, comprehension, fluency, phonemic awareness, and phonics) that had been identified through a review of literature. It also obtained information on what music therapy interventions were used to address those specific areas of literacy, as well as how the effectiveness of these interventions was measured. The results of the study revealed that vocabulary and comprehension were most frequently addressed within music therapy interventions. The same music therapy interventions also seemed to be used to address all of the sub-areas of literacy. The results also indicated that referrals and collaboration with other professionals, parents, and caregivers were important to music therapists in determining the effectiveness of their music therapy interventions in relation to literacy skills.

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TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
LIST OF TABLES	vii
CHAPTER	
I. INTRODUCTION	1
Definition of Terms	5
II. LITERATURE REVIEW	7
Music with Early Childhood and School-Aged Populations.....	10
Music and Literacy	12
III. METHOD	20
Participants	20
Survey Instrument	20
Procedures	22
IV. RESULTS	24
Section I: Demographic Information.....	24
Demographic Information of Participants	24
Demographic Information of Participants who Address Literacy Skills within Their Music Therapy Interventions.....	28
Section II: Facets of Literacy	31
Vocabulary	32
Comprehension	33
Fluency.....	34

Table of Contents—Continued

CHAPTER	
	Phonemic Awareness 35
	Phonics 36
	Comparison of All Facets of Literacy 37
	Summary of which Music Therapy Interventions are Most Frequently Used to Address Sub-areas of Literacy 38
	Section III: Assessment, Evaluation, and Resources 41
V. DISCUSSION 47
	Demographics of Participants 48
	Facets of Literacy 49
	Vocabulary 49
	Comprehension 51
	Fluency 52
	Phonemic Awareness 52
	Phonics 53
	Summary of All Facets of Literacy 54
	Assessment, Evaluation, and Resources 55
	Recommendations for Future Research 57
	Implications of the Research 59
APPENDICES	
A. Protocol Clearance Form from Western Michigan University Human Subjects Institutional Review Board (HSIRB) 60
B. Participant Invitation Letter 62

Table of Contents—Continued

C. Participant Survey.....	64
REFERENCES	71

LIST OF TABLES

1. Length of Practice as a Professional Music Therapist.....	24
2. Professional Certifications Held by Participants	26
3. Participants' Primary Employment Setting	27
4. Participants' Primary Employment Setting Where Encountering Individuals with Literacy Difficulties	30
5. Facets of Literacy Addressed by Music Therapists	38
6. Summary of which Music Therapy Interventions are Most Frequently Used to Address Sub-areas of Literacy.....	40
7. Sources Available to Music Therapists to Determine Literacy Difficulties	42
8. Evaluating Effectiveness of Music Therapy Interventions in Relation to Literacy Skills	43
9. Resources Used by Music Therapists to Gain New Skills in Teaching Literacy	45

CHAPTER I

INTRODUCTION

A child's knowledge of the world and of language largely determines the nature and quality of the meanings he or she constructs when learning to read and write.

Reading and writing is the key to all learning, and providing children with effective literacy practices is one of the primary goals of educational systems. How children progress in reading and writing will predict if they will function competently in school and go on to contribute in a literate society. Gambrell, Malloy, and Mazzone (2007) define the act of becoming literate as:

“...using strategies independently to construct meaning from text, using text information to build conceptual understanding, effectively communicating ideas orally and in writing, and developing the intrinsic desire to read and write” (pp. 13).

In 1998, the National Research Council (NRC) published *Preventing Reading Difficulties in Young Children*, which identified several areas that were central and necessary to the process of learning to read. The National Reading Panel (NRP) then built on this foundational work by the NRC by taking these ideas and holding regional discussion panels to gain more input from educators, parents, and other professionals involved in teaching reading. The panel discussed and considered a wealth of topics in literacy, finally settling on several areas that would be intensely studied and researched. These areas included: Alphabetic (phonemic awareness instruction and phonics instruction), Fluency, and Comprehension (vocabulary instruction and text

comprehension instruction). The areas selected were not meant to be an exhaustive list, but had to be pared down due to the sheer amount of studies related to the process of learning to read. The NRP reviewed and evaluated the research literature relating to the areas listed above, and began building conclusions based on the scientific research. In April 2000, the National Reading Panel concluded their research and submitted their report at a hearing before the United States Senate Appropriations Committee's Subcommittee on Labor, Health and Human Services, and Education. The next year, the report was used as the basis to create *Reading First*, a reading initiative that was part of the No Child Left Behind Act of 2001 (U.S. Department of Education, 2001).

With the implementation of No Child Left Behind (U.S. Department of Education, 2001), educational agencies around the United States focused on identifying and establishing effective practices for literacy learning. In particular, the Act currently focuses on children ranging from preschool to grade 3 in hopes of ensuring every student can read at grade level or above by the end of grade 3. Research has shown that if a student has not learned the fundamentals of reading at grade level by 4th grade, the likelihood of reading at grade level in the future decreases.

With the focus on establishing effective practices within educational systems, research in the field of reading education has examined which approaches are the most effective. The consensus of opinion appears to be that while no single instructional program or method has been found effective in teaching **all** children to read, *evidence-based best practices* have promoted high levels of reading achievement (Gambrell, Malloy, & Mazzoni, 2007).

The disciplines of music education and music therapy have long studied the effects of music on literacy skills for all ages. Researchers in both fields have found that music is effective in teaching areas such as phonemic awareness (Anvari, Trainor, Woodside, & Levy, 2002; Fisher, 2001; Gromko, 2005; Lamb & Gregory, 1993; Maclean, Bryant, & Bradley, 1987), oral language development (Fisher, 2001), print awareness (Register, 2001; Standley & Hughes, 1997), reading comprehension (Register, Darrow, Standley & Swedberg, 2007), and vocabulary (Colwell, 1994; Colwell & Murlless, 2002; Douglas & Willatts, 1994; Register, Darrow, Standley & Swedberg, 2007).

A number of studies have focused on using a variety of music interventions and techniques as a tool for literacy learning. The use of books based on a familiar song, such as *The Wheels on the Bus* or *There was an Old Lady who Swallowed Fly* (Barclay & Walwer, 1992; Jalongo & Ribblett, 1997; Renegar, 1990) and the use of familiar nursery rhymes, such as *Hickory Dickory Dock* or *Humpty Dumpty* (Maclean, Bryant & Bradley, 1987) were both recommended as strategies to engage students in literacy learning. The pairing of props, puppets, or play items with music has been found effective (Register, 2006), as well as the use of letter, word, picture, or logo cards (Register, 2004; Register, Darrow, Standley & Swedberg, 2007; Standley & Hughes, 1997) in increasing identification and vocabulary.

Another intervention used to improve literacy is the act of shared reading, which involves the teacher/therapist reading and singing the text of the book while pointing to individual words (Colwell, 1994; Standley & Hughes, 1997). Standley & Hughes (1997) described a technique of creating songbooks for and with their students that were directly

related to the songs and music activities utilized during their sessions. Several other interventions were also recommended by researchers, educators, and therapists, including incorporating sequence songs such as *The Green Grass Grows All Around* (Fisher & McDonald, 2001; Register, Darrow, Standley & Hughes, 2007), rhythmic chanting of words and/or text (Colwell & Murlless, 2002); songwriting or lyric rewrites (Gfeller, 1987; McIntire, 2007; Smith, 2000), instrument playing that is cued by a specific word or character in the story (Register, Darrow, Standley & Hughes, 2007), and the use of sentence strips of text or lyrics that are then placed in order, thus recreating a book or song (Brown & Brown, 1997). All of the aforementioned interventions and techniques were found to be effective, appropriate, and engaging to individuals with literacy needs.

The purpose of this study was to identify the current trends and common approaches of professional music therapists who incorporate literacy learning into their practice. The study targeted professional music therapists who worked in the areas of early childhood and school-aged populations. The following research questions served as the basis for this study:

1. Do music therapists address literacy skills within their music therapy interventions?
2. How long have music therapists, in the course of their career, used music therapy interventions to address literacy skills?
3. What is the primary employment setting in which music therapists encounter individuals with literacy difficulties?
4. What is the age range in which music therapists encounter individuals with literacy difficulties?

5. Do music therapists address areas of literacy, such as vocabulary, comprehension, fluency, phonemic awareness, and/or phonics within their music therapy interventions?
6. What music therapy interventions do music therapists utilize to address areas of literacy, such as such as vocabulary, comprehension, fluency, phonemic awareness, and/or phonics?
7. What sources are available to music therapists to determine whether an individual has difficulties with literacy?
8. How do music therapists measure the effectiveness of their music therapy interventions in relation to literacy skills?
9. What resources do music therapists use to gain new skills in teaching literacy?
10. What types of music (live music or recorded music; pre-composed or therapist-composed) are being used to address literacy skills by music therapists?

Definition of Terms

For the purpose of this study, the term literacy was defined as the ability to use language to read, write, speak, and listen. There are many different facets that make up the framework of literacy. Facets of literacy related closely to this research study include phonological awareness, phonemic awareness, phonics, fluency, vocabulary, and comprehension.

- Phonological awareness is a broad term that refers to identifying and manipulating larger parts of spoken language, such as words and syllables.

- Phonemic awareness is defined as the ability to notice, think about, and work with the individual sounds in spoken words (e.g. the awareness that the word big is made up of 3 phonemes - /b/, /i/, /g/).
- Phonics is defined as the relationship between the letters of written language (graphemes) and individual sounds (phonemes) of spoken language (e.g. the recognition that the written letter 'b' makes the sound 'buh').
- Vocabulary is defined as the words (oral or written) that are needed in order to communicate effectively.
- Comprehension is defined as the ability to understand and gain meaning from what has been read.
- Fluency is defined as the ability to read text accurately and quickly with expression and comprehension.

CHAPTER II

LITERATURE REVIEW

Many factors play a role in how a child learns to read. Literacy begins in infancy and continues to grow as long as there is a literacy-rich environment and experiences at home that help a child acquire skills. All children come to school with prior knowledge about reading and writing, and each child is different in that understanding (Morrow & Tracey, 2007). When children enter school, a comprehensive and supportive environment is required for maximum literacy learning.

Gambrell, Malloy, and Mazzoni identified ten best practices for literacy instruction in their publication *Evidence-Based Best Practices for Comprehensive Literacy Instruction* (2007). The authors suggest creating a learning environment that fosters literacy motivation, by offering children abundant opportunities for interacting with high quality books and literature, making choices, and creating social interactions. The reading experiences that are offered must be meaningful and authentic to the children, for then it is more likely that transfer will occur. This concept is echoed by Lin (2001), who also believed that one-on-one interactions with adults were especially important for children in order to have opportunities to talk, sing, play, and do fingerplays. Children then build on knowledge with practice, which in turn expands vocabulary and concepts. Gambrell, Malloy, and Mazzoni (2007) also suggested that technology be used to link ideas that come out of teacher-led and student-led discussions of text. In addition to discussions of text, students should receive scaffolded instruction in phonemic awareness, phonics, fluency, vocabulary, and comprehension to promote

reading. These same areas were identified as being critical to literacy learning in the National Reading Panel report from 2000. While this is not an exhaustive list of the components of reading, it also important to note that overemphasizing one area, such as phonics or phonemic awareness, is not to be encouraged (Pearson, Raphael, Benson, & Mada, 2007). Instead, balance between all areas of literacy should be encouraged, as children need many different strategies to learn to read (Whitehead, 2004).

Vocabulary is defined as the words (oral or written) that are needed in order to communicate effectively. It may take several contacts with a new word for children to use it independently and comfortably. If the word is meaningful in context, the more likely children are to use and re-use it (Palmer & Bayley, 2005). Most vocabulary is learned indirectly through the everyday experiences of a young child, although some vocabulary should be taught directly. Vocabulary is an important facet of reading because readers must know what the words mean before they can comprehend what they are reading (Center for the Improvement of Early Reading Achievement [CIERA] & National Institute for Literacy [NIFL], 2003).

Comprehension is defined as the ability to understand and gain meaning from what has been read. A reader interprets and constructs meaning as he or she interacts with text, all the while using previous knowledge or experience (Learning Point Associates, 2005). Readers who comprehend are purposeful and active in terms of gathering information and events, identifying a sequence, and making sense out of all of the text (CIERA & NIFL, 2003).

Fluency is defined as the ability to read text accurately and quickly with expression and comprehension. Fluency provides a bridge between word recognition and

comprehension, thus leading the reader to make connections among the ideas in the text (CIERA & NIFL, 2003). A fluent reader is free from word identification problems, has a large accumulation of sight words, can automatically decode words, and self corrects (Learning Point Associates, 2005). Despite the popular belief, there is no strong evidence from research that states that silent, independent reading is helpful in improving fluency and overall reading achievement. Readers who have not attained fluency are not likely to make efficient use of silent reading, but direct instruction, guidance, and feedback from an educator may be especially helpful and important. An educator should model appropriate fluency as well as provide opportunities for the reader to read passages aloud (CIERA & NIFL, 2003).

One area of literacy that has received a large amount of attention and study is phonemic awareness. Phonemic awareness (PA) is defined as the ability to notice, think about, and work with the individual sounds (phonemes) in spoken words. For example, the word 'big' is made up of 3 phonemes - /b/, /i/, /g/. There are approximately 41 phonemes in the English language (CIERA & NIFL, 2003). PA has many different levels, and includes the concept of rhyme and the ability to manipulate, blend and segment letters thus forming new words. PA develops gradually for many children, but is one of the best predictors of success in learning to read (Cunningham, 2007).

Phonemic awareness is a subcategory of phonological awareness. Phonological awareness is a much broader term and it includes identifying and manipulating larger parts of spoken language, such as words and syllables. Phonemic awareness should not be confused with phonics. Phonics is the understanding that there is a relationship between sounds of *spoken* language (phonemes) and the individual letters that represent

those sounds in *written* language (graphemes) (National Association for the Education of Young Children, 1998). Reading words accurately allows children to focus on the meaning and comprehension of the text (CIERA & NIFL, 2003). Learning phonics is effective when it is introduced early, but should not be the only aspect of learning to read.

For phonemic awareness, phonics, vocabulary, comprehension, and fluency to all contribute to the act of learning to read, an authentic, meaningful, and motivating literacy environment must be in place. A variety of high quality books and materials should be readily available, as well as opportunities for choices and social interactions. Literacy experiences should be meaningful, whether it is for pleasure, to be informed, or to perform a task. Transfer is more likely when students are engaged in meaningful literacy learning (Bobys, 2000; Gambrell, Malloy, & Mazzoni, 2007).

The arts, including music and movement, creative drama, and visual arts, are in a unique place to engage the senses and offer different opportunities to learn (Heymfeld, 1997). Arts act as a change of pace as children engage in the learning processes of exploring knowledge, solving problems, constructing ideas, and communicating thoughts, feelings, and concepts (Varnon, 1997). The next section of the literature review will explore how music can stimulate learning.

Music with Early Childhood and School-Aged Populations

Children are often captivated by music in their environment. Music is a viable medium for teaching young children because it offers developmentally-appropriate opportunities for social interaction, creativity, leadership opportunities, and sensory experiences. Music often presents experiences in instrument playing, singing, gross and

fine motor movement, listening, discussing, playing, and composing. Music may provide an environment in which children are successful in participating in chosen activities and experiences. Exposure to a musical environment during the early childhood years can lead to a lifelong enjoyment, appreciation, and understanding of music (Mueller, 2003). Music also captures children's attention, creates an exciting and fun atmosphere, and can often help them to focus for a longer period of time.

Standley and Hughes (1996) researched developmentally-appropriate activity components within an early intervention music therapy program. The researchers measured the levels of group attentiveness and individuals' success in required tasks, as well as the effectiveness of positive teacher involvement. Lastly, the researchers assessed the curriculum according to the following categories: Communication/language skills, social/personal/emotional skills, cognitive concepts, and motor skills. The results indicated that children were able to maintain a high level of attentiveness while simultaneously engaging in social, motor, and cognitive tasks. These findings support the idea that music therapy interventions can be designed to be both developmentally and age appropriate.

Humpal (1990) examined trends of music therapy within early intervention programs. She discussed using music as a strategy in the treatment of communication and language development, as well as using music as a treatment with individuals with cerebral palsy and autism. Humpal also identified several domains of functioning that could be addressed through music therapy, including the cognitive, motor, communication, and personal/social/emotional domains. The facets of music are

effective in addressing many levels of functioning, including the areas of language and literacy.

Music and Literacy

Music and language both have natural rhythm and melody, which engages children and gives meaning to what they learn. Within an active group musical activity, the predictability, rhythm, and rhyme that are found in many early childhood songs are excellent vehicles for learning literacy (Anderson-Hennigsgaard, 1996). Many music education and music therapy researchers have investigated the use of music and its effectiveness in the teaching of a variety of literacy skills, and those findings are summarized below.

Standley & Hughes (1997) evaluated the effects of developmentally-appropriate music therapy interventions which were specifically designed to enhance the prereading and writing skills of children aged 3-5 years. The music therapy curriculum focused on areas related to print awareness, reading, and writing, and included tasks of alphabet/letter recognition, book handling, phonemic awareness, word reading, invented spelling, and echo reading/singing. Three dependent measures of literacy skills were obtained: Print Awareness Test for Logos, Print Concept Checklist, and The Developmental Writing and Language Skills Checklist. Upon analysis of pretest and posttest scores, the researchers found that music significantly enhanced print concepts and prewriting skills of the children. It was also evident that the music activities provided much pleasure and excitement to the children. The authors concluded that music may help children practice language patterns, learn print and book conventions,

develop comprehension through song dramatization, and begin decoding written language.

Register (2001) replicated Standley and Hughes' 1997 study by evaluating the effects of music therapy interventions designed specifically to enhance the prereading and writing skills of children aged 4-5 years old. Using the same three dependent measures and focusing on the same areas of literacy as in the Standley and Hughes study, Register found that the music therapy sessions designed with specific academic measures (such as prereading and writing) were more effective than sessions that provided general music activities. The researcher recommended that music therapists should develop a focused and specific curriculum by balancing music activities focused on different forms of literacy (reading, listening, speaking, and writing). By developing a focused curriculum, the researcher suggested that it may aid in identifying problem areas as well as promoting development of certain literacy skills. The researcher also concluded that collaboration with the educators involved in the classroom played a crucial role in fostering the growth of the student's literacy skills.

Register, Darrow, Standley and Swedberg (2007) evaluated the efficacy of using music as a remedial strategy to enhance the reading skills of students who were identified as having a specific learning disability. The purposes of the study were to: (a) develop an intensive short-term music curriculum designed to improve reading comprehension and vocabulary, (b) implement the curriculum with 2nd grade students and students identified as having a disability in reading, and (c) evaluate the effectiveness of the curriculum. The music curriculum was constructed to address several areas of reading, including word knowledge, word decoding, and reading comprehension. The students' reading

skills were evaluated via the vocabulary and reading comprehension subtests of the *Gates-MacGinitie Reading Test*®. The data revealed that students with a disability in reading significantly improved from pre to posttest in areas of word knowledge and decoding. The data also revealed a slight but non-significant improvement in reading comprehension, an area that is often resistant to intervention strategies.

Register (2004) studied the effects of a music therapy program that was specifically designed to teach literacy skills versus the “Between the Lions” television show on the emerging literacy behaviors of children between the ages of 5-7 years. The “Between the Lions” television program incorporates music, stories, and puppetry all while focusing on early literacy skills, such as print awareness concepts, alphabet knowledge, and understanding the purposes of reading, whether it be for pleasure or for information. The music sessions were paired with books, as well as letter and word cards in order to practice letter naming, word building, rhyming, and concepts of print. The students were pre-tested in eight sub-tests of the Test of Early Reading Ability-3rd edition (TERA-3) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and were then assigned to a treatment condition. The treatment conditions included a combination of Music/Video, Music-Only, Video-Only, and a control group. After participating in one of the treatment conditions, the students were given a post-test of the TERA-3 and DIBELS. The results indicated that the combination of the music session and video led to increases in four of the eight sub-tests, including phoneme segmentation, letter naming, and initial sounds tests. The researcher also observed that off-task behavior was lower in the music conditions than in other conditions.

The effect of singing versus chanting on reading accuracy was the purpose of a study by Colwell and Murlless (2002). The researchers focused on a small sample of elementary students (ages 6-8) diagnosed with learning disabilities. The authors tracked the students' accurate reading of a word and the students' on- and off-task behaviors in music versus non-music conditions. Over four weeks, the students were tested on a set of 8-9 words while participating in either their regular daily reading program or a music group. The music condition was split up into two groups: melodic singing or rhythmic chanting. The results revealed that all participants improved pre to posttest on all word sets, but there was not a marked improvement between the music and non-music condition or between the two music conditions (singing versus chanting). The researchers also noted that the participants exhibited more on-task behaviors during the music conditions.

Colwell (1994) investigated the effects of three methods of shared reading paired with music on kindergarten children's (ages 4.7-6.3 years) reading accuracy. Shared reading was defined as participation in reading by both the teacher and the students. The three methods of shared reading included the song rehearsal of text set to music (Group 1), spoken and song rehearsal of text set to music (Group 2), and spoken rehearsal only of text (Group 3). Each subject was tested on his or her reading accuracy of the book that was studied in each unit. Since students in Group 1 and Group 2 exhibited greater reading accuracy than the students in Group 3, the researcher concluded that the addition of song rehearsal as a structural prompt facilitated greater reading accuracy. The author also observed that the attention and participation level of the subjects in the two groups with song rehearsal appeared to be higher. This was evidenced through eye contact to the

book, vocal participation, and the number of children following the print with their finger. The classroom staff also reported that the subjects in the song rehearsal conditions interacted with the books independently outside the music sessions.

The relations among musical skills, phonological processing, and early reading ability was examined in a study by Anvari, Trainor, Woodside, and Levy (2002). One hundred 4- and 5-year-old children were asked to participate in a set of music perception tasks that focused on rhythm, melody, and chord processing. In addition to the music tasks, the children were asked to complete tasks related to phonemic awareness, letter and word identification, and vocabulary. All of these tasks were correlated, and the results indicated that music perception is significantly related to phonemic awareness and early reading ability. The link between music perception and phonemic awareness may suggest that they share some of the same auditory mechanisms.

Lamb and Gregory (1993) also investigated the relationship between musical perception and phonemic awareness in children between the ages of 4 and 5 years. The children were given tests of reading (concepts about print, word matching, letter sounding, and word reading), phonic reading, phonemic awareness, and musical ability (pitch awareness and timbre awareness), and the results were correlated in order to discover if there was a relationship. The researchers determined that pitch awareness was significantly correlated to the reading and phonic reading tests, and phonemic awareness was significantly related to pitch discrimination.

Douglas and Willatts (1994) examined the possible link between musical ability (pitch and rhythm) and literacy skills in children between the ages of 7 and 8 years. The children were tested on verbal ability, aural awareness in pitch and rhythm, word

recognition, and attainment in spelling. The results were correlated and revealed that rhythmic ability was significantly correlated with both word recognition and spelling. The authors then decided to put their research and subsequent conclusions into practice by setting up a pilot intervention study. A control group (no music) and a treatment group (music focusing on rhythm and pitch activities) were both tested on word recognition. After a treatment period of six months and a post-test in word recognition, the results revealed that the differences in the test scores between groups were not significant, but the scores on the post test for the treatment group were significantly higher.

Gromko (2005) investigated the effect of music on phonemic awareness in kindergarten children. The author predicted that music instruction that focused on analyzing a simple song into patterns would enhance children's ability to segment words into phonemes. The subjects were pre-tested individually on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) subtests of initial-sound fluency, letter-naming fluency, phoneme-segmentation fluency, and nonsense-word fluency. The students were then placed into either a treatment group or a control group. The treatment group participated in music instruction that focused on active participation and movement, as well as visual representations of concepts. The students in the treatment group achieved significantly greater gains in phoneme-segmentation fluency as measured by the DIBELS, but not on any of their other measures. The author suggested that children may have benefited from the music instruction because of music's emphasis on aural development.

Cutietta (1995) summarized a total of twelve studies that focused on the relationship between music instruction and reading skills. As a result of the compilation, the researcher stated that the majority of the studies supported the existence of the connection between music instruction and reading. More specifically, the students who were instructed in the skill of reading music notation also increased in skill in the area of reading. The researcher also speculated that learning musical skills could transfer to enhancing reading skills because 1) reading music is a left-to-right process, 2) reading requires a student to continue without stopping and starting again, and 3) reading requires sustained attention on written symbols.

Music has also been used as a reward for improving literacy skills. The effects of contingent guitar lessons on reading behavior were researched by Eisenstein (1974). Baseline reading behaviors for 12 seven-year-old children were recorded individually, and then the children would engage in several different reading behaviors. After a certain number of correct reading responses, the children were rewarded with a guitar experience (students would play simple folk songs and learn chords and strumming patterns). The results revealed that the level of correct reading responses increased during all of the treatment phases when compared with the baseline. When the guitar was withdrawn, the level of correct reading responses decreased.

As stated by Gambrell, Malloy and Mazzoni (2007), it is important to determine and utilize effective and evidence-based best practices in literacy instruction. The research presented above suggests that music has a positive effect on the literacy skills of young children. Specifically, the extant literature base indicates that music is effective in improving phonemic awareness, oral language development, print awareness, reading

comprehension, and vocabulary. It is important to note that many of the published articles in the area of music and literacy are descriptive rather than experimental studies. Nevertheless, the majority of these studies describe practical applications (e.g. differing techniques, approaches, and trends) that were based on the findings of empirical research.

It was the purpose of this study to identify the current trends and common approaches of professional music therapists who incorporated literacy learning into their practice while working with early childhood and school-aged populations. The study determined if music therapists were addressing the specific areas of literacy (vocabulary, comprehension, fluency, phonemic awareness, and phonics) that have been identified through the extant literature. It also obtained information on what music therapy interventions were used to address these specific areas of literacy, as well as how the effectiveness of these interventions was measured.

CHAPTER III

METHOD

Participants

Professional music therapists who reported to the American Music Therapy Association (AMTA) as working with early childhood or school-aged populations were solicited to participate in this study.

Survey Instrument

The participants were asked to respond to a survey constructed by the author entitled *Music and Literacy: Current trends and common approaches of music therapists*. The survey was designed by the researcher since previously created surveys did not address the research questions in this study.

There were three distinct sections of the survey. The first section of the survey focused on demographic information of the participants, including information about length of practice as a professional music therapist, highest degree completed, professional credentials held, classification of primary employment setting, and age range of music therapy clients. The participants were also asked if they address literacy skills within their music therapy practice. If the participants indicated that they do not address literacy skills, they were thanked for reading and were excused from completing the rest of the survey.

The second section investigated if specific areas of literacy (vocabulary, comprehension, fluency, phonemic awareness, and phonics) were addressed within the

participants' music therapy interventions. Brief and concise definitions of each area were provided for the participants within the survey items. If participants indicated that they addressed any of these specific areas of literacy, they were then asked to specify what types of music therapy interventions they had used previously to address that area. Eleven music therapy interventions were listed, all of which had been identified as effective music therapy interventions in the extant literature. The music therapy interventions were listed in the following order:

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book

The third section focused on several questions about how music therapists assessed and evaluated the effectiveness of music therapy interventions in relation to

literacy skills. The participants were asked what sources were available to determine whether an individual has difficulties with literacy. The participants were also asked to indicate what resources they used when gaining new skills in the teaching of literacy. The last question of the third section explored the types of music and songs the participants have used to address literacy skills, including whether they have used pre-composed songs or therapist-composed songs and if they have used live or recorded songs.

Survey questions consisted of yes/no questions and choices or checklists with one or multiple close-ended or open-ended answers.

Procedures

The survey instrument was reviewed several times by the thesis committee and suggested changes were implemented when necessary. After the committee gave final approval of the survey, the researcher submitted an application for review to the Western Michigan University Human Subjects Institutional Review Board (WMU HSIRB). Suggestions given by the HSIRB were then implemented and the application was resubmitted. The HSIRB then approved the study (see Appendix A).

After HSIRB approval, the researcher requested the use of e-mail addresses of music therapists who reported to the American Music Therapy Association (AMTA) as working in early childhood or school-aged settings. The researcher contacted and received permission to use the e-mail addresses from Dr. Andrea Farbman, Executive Director of AMTA. An e-mail address request form was then submitted to the AMTA,

and the researcher was sent a text file containing 721 names and e-mail addresses of the professional music therapists chosen for the study.

The survey questions were accessed through SurveyMonkey, an online survey hosting company. An invitation and link to the survey were included in the e-mail invitation sent to the music therapists chosen for the study. The participants were asked to complete the survey within two weeks after receiving the initial e-mail. A week after the initial e-mail was sent, the researcher sent a reminder e-mail to all participants.

Out of 721 e-mail invitations sent, 47 bounced back due to invalid e-mail addresses. Six music therapists contacted the researcher to state they could not complete the survey because they no longer worked in early childhood or school settings. Out of 668 possible participants, 228 (34% return rate) responded to the survey.

CHAPTER IV

RESULTS

Section I: Demographic Information

Demographic Information of Participants

How long have the respondents practiced as a professional music therapist? The majority (65%) of respondents reported having 1 to 15 years of practice as a professional music therapist (see Table 1). Twenty-five percent of participants reported having more than 21 years of experience as a music therapist.

Table 1

Length of Practice as a Professional Music Therapist (n=228)

Number of years	Percent of respondents
1-4 years	24%
5-10 years	21%
11-15 years	20%
16-20 years	10%
21-25 years	7%
26-30 years	9%
30+ years	9%

What is the highest degree completed by participants? Forty-seven percent of the respondents reported possessing a Bachelor's degree, while 49% of the respondents reported holding a Master's degree. Four percent reported having a Doctorate degree.

Which professional credentials are held by participants? Participants were asked to indicate all music therapy certifications. The results of this question revealed that 91% of the respondents were board-certified as a music therapist (MT-BC), while 9% were Registered (RMT) and 2% were Certified (CMT) (see Table 2). The data suggests that some participants may hold their MT-BC credential in addition to another credential. When the National Association for Music Therapy (NAMT) and the American Association for Music Therapy (AAMT) unified in 1998 to form the American Music Therapy Association (AMTA), both organizations agreed to stop rewarding their own credentials and accept the MT-BC credential as the sole indicator of professional status. However, music therapists holding the association credentials of RMT or CMT and not wishing to become board-certified could choose to retain the association credential and be placed on the National Music Therapy Registry until 2020. The other option was for music therapists who had both credentials (e.g. RMT-BC) at the time of the NAMT and AAMT unification to drop the MT-BC and retain the original credential of their respective association (B. Wilson, personal communication, September 22, 2008).

Twenty-five percent of respondents indicated holding additional credentials and certifications. Additional certifications and credentials all respondents held included Neurologic Music Therapist (NMT) (8%), Licensed Creative Arts Therapist (LCAT) (7%), Wisconsin Music Therapist Registered (WMTR) (2%), Music Therapist Accredited (MTA – Canadian Certification) (1%), Licensed Mental Health Counselor (LMHC) (1%),

and Neonatal Intensive Care Unit – Music Therapist (NICU - MT) (1%). Three percent of participants reported having an educational license or certification.

Table 2

Professional Certifications Held by Participants (n=228)

Certification	Percent of respondents
Board-certified Music Therapist (MT-BC)	91%
Registered Music Therapist (RMT)	9%
Certified Music Therapist (CMT)	2%
Other	25%
Neurologic Music Therapist (NMT)	8%
Licensed Creative Arts Therapist (LCAT)	7%
Educational certification/license	3%
Wisconsin Music Therapist Registered (WMTR)	2%
Music Therapist Accredited (MTA)	1%
Licensed Mental Health Counselor (LMHC)	1%
Neonatal Intensive Care Unit – Music Therapist (NICU MT)	1%

Which primary employment setting do participants encounter individuals with special needs? The results (see Table 3) indicated that almost half of the respondents worked in a public/private elementary school (24%) or in a private setting such as a client’s home or a music therapy studio (24%). Seven percent of the respondents stated that they worked in an early education setting such as an early childhood or child

development center. Four percent of the participants reported working in an early intervention program, and an additional four percent reported working in a preschool for typically developing children.

Thirty-five percent of respondents indicated their primary employment setting fell in the ‘Other’ category. Upon examination of these responses, it was revealed that these respondents worked in a combination of public and/or private elementary and secondary school-based settings and not one primary employment setting. Other employment settings included center-based settings not affiliated with a public/private school, hospital/nursing facilities, community music schools, and settings in which music therapists work with adults.

Table 3

Participants’ Primary Employment Setting (n=228)

Setting	Percent of respondents
Other	35%
Public/Private Elementary School	24%
Private Setting (e.g. client’s home, music therapy studio)	24%
Early Education Setting (e.g. early childhood, child development center)	7%
Early Intervention Program (e.g. Head Start, Early On)	4%
Preschool (e.g. for typically developing children)	4%
Public/Private Secondary School	3%
Learning Center	1%

What age range of music therapy clients do participants see in the above primary employment setting? Due to the variety of employment settings reported in the previous survey question, most of the respondents reported working with a diverse and broad-based age range of clients. The results indicated that a majority of respondents (74%) worked with music therapy clients between the ages of 3-5 years old, and 74% reported working with clients between the ages of 6-8 years old. Sixty-seven percent stated working with clients who were 9-13 years old, and 53% reported working with clients who were 14-18 years old. Forty-six percent indicated working with clients over the age of 19.

Do music therapists address literacy skills within their music therapy interventions? For the purpose of the study, the term literacy was defined as the ability to use language to read, write, speak, and listen. The results revealed that 92% or 209 respondents addressed literacy skills within their music therapy interventions. These 209 respondents then continued on to the next section of the survey. Eight percent of participants replied that they did not address literacy skills with their music therapy interventions. They were thanked for their participation and excused from the study.

Demographic Information of Participants who Address Literacy Skills within Their Music Therapy Interventions

How long have participants used music therapy interventions to address literacy skills with individuals with literacy difficulties? Thirty-six percent of the respondents had 1-4 years of experience using music therapy interventions to address literacy skills. An additional 28% reported having 5-10 years of experience using music therapy

interventions to address literacy skills, while 13% reported having 11-15 years of experience. Twenty-three percent of the respondents stated that they had 16+ years of experience using music therapy interventions to address literacy skills.

Which primary employment setting do participants encounter individuals with literacy difficulties? The survey results indicated that 29% of the respondents worked with individuals with literacy difficulties in public/private elementary schools, while 25% worked in private settings (see Table 4). Eight percent of respondents reported working in an early education setting, and 5% indicated working in public/private secondary schools. Four percent reported encountering literacy difficulties in a preschool for typically developing children, and 1% reported working in a learning center. Twenty-four percent of the participants answered in the ‘Other’ category. Upon further examination of these ‘Other’ responses, it was revealed that these respondents worked in a combination of public/private elementary and secondary school-based settings and not one primary employment setting. These schools varied in description from a pre-K to 12th grade school to a Montessori preschool to a self-contained special school. Other employment settings included center-based settings not affiliated with a school, community music schools, and hospital/nursing facilities.

Table 4

Participants' Primary Employment Setting Where Encountering Individuals with Literacy Difficulties (n=207)

Setting	Percent of respondents
Public/Private Elementary School	29%
Private Setting (e.g. client's home, music therapy studio)	25%
Other	24%
Early Education Setting (e.g. early childhood, child development center)	8%
Early Intervention Program (e.g. Head Start, Early On)	4%
Preschool (e.g. for typically developing children)	4%
Public/Private Secondary School	5%
Learning Center	1%

What age range of music therapy clients with literacy difficulties do music therapists see in the above primary employment setting? Due to the diverse employment settings indicated by the respondents in the previous survey question, there was a variety of client age ranges reported. According to the survey results, 77% of the respondents reported working with music therapy clients with literacy difficulties between the ages of 6-8 years old. Seventy-two percent indicated they worked with clients between the ages of 3-5 years old, and 64% specified they worked with clients between the ages 9-13 years old. Additional respondents indicated they worked with clients between the ages of 14-

18 years old (42%), as well as clients older than 19 years (33%) and clients ages birth-2 years old (16%).

Section II: Facets of Literacy

For this section of the survey, five facets of literacy were defined within the survey for the participants. These facets included vocabulary, comprehension, fluency, phonemic awareness, and phonics. The participants were asked if they specifically address each area within their music therapy interventions. If the participants answered negatively, they were directed to skip to the next question. If the participants answered positively, they were asked to indicate what types of music therapy interventions were used to address that facet of literacy. Eleven music therapy interventions were then listed, all of which had been identified as effective music therapy interventions in the extant literature. These music therapy interventions were listed in the following order:

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)

- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book

The respondents were also provided with a space where they could include additional music therapy interventions they used to address that facet of literacy. These open-ended responses were analyzed and reported in addition to the top five most frequently used music therapy interventions for each sub-area of literacy.

Vocabulary

Do music therapists address vocabulary in their music therapy interventions?

For the purpose of this study, vocabulary was defined as the words (oral or written) that are needed in order to communicate effectively. According to the results of the survey, 98% of the respondents indicated that they address vocabulary within their music therapy interventions. Two percent of the respondents reported that they do not address vocabulary.

What music therapy interventions do music therapists use to address vocabulary?

The results of the survey revealed the top five music therapy interventions used to address vocabulary included the use of letter, word, picture, or logo cards to accompany music activities (87%), the use of props, puppets, or play items to accompany song activities (83%), rhythmic chant of words to text (80%), sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*) (79%), and the use of books that are

based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There was an Old Lady*) (78%).

Nineteen percent of the respondents indicated additional music therapy interventions in the 'Other' category. Upon further examination of these open-ended responses, several commonalities were identified. To address the area of vocabulary, the participants reported using improvisation that involved individual sounds, words, and phrases. Respondents also indicated using sign language, as well as echo and call/response songs all while focusing on certain vocabulary words. In addition, the Neurologic Music Therapy (NMT) treatment technique of Rhythmic Speech Cueing was cited as a music therapy intervention to address vocabulary. Non-music materials were also reported as being useful in addressing vocabulary, including the use of computer software (GarageBand, Picture It), augmentative communication, and white boards that could be used as a visual aid for the clients.

Comprehension

Do music therapists address comprehension in their music therapy interventions?

For the purpose of this study, comprehension was defined as the ability to understand and gain meaning from what has been read. The survey results indicated that 85% of respondents indicated that they address comprehension within their music therapy interventions.

What music therapy interventions do music therapists use to address comprehension? The results revealed the top five music therapy interventions used to address comprehension included the use of letter, word, picture or logo cards to

accompany music activities (81%), sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*) (73%), the use of props, puppets, or play items to accompany song activities (73%), the use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There was an Old Lady*) (71%), and shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words (65%).

Eighteen percent of the respondents answered in the ‘Other’ category. Upon examination of the individual responses, several music therapy interventions and techniques were revealed to be common among respondents. One technique described by several respondents included the use of lyric analysis and discussion. Another intervention used to address comprehension was entitled “Listen and Draw,” in which an individual would first listen to the words of a song or book and then create a drawing about the content of that specific song or book. Respondents also reported using “Wh” questions (who, what, where, when, and why?) as a way to reinforce comprehension in literacy learning. The respondents indicated another commonly used intervention of physically acting out specific actions or movements based on a word, story, or song.

Fluency

Do music therapists address fluency in their music therapy interventions? For the purpose of this study, fluency was defined as the ability to read text accurately and quickly with expression and comprehension. Survey results revealed that 56% of respondents used music therapy interventions to address fluency.

What music therapy interventions do music therapists use to address fluency?

The survey results indicated the top five music therapy interventions used to address fluency included rhythmic chant of words or text (71%), the use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There was an Old Lady*) (64%), the use of letter, word, picture or logo cards to accompany music activities (63%), shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words (61%), and sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*) (53%).

Twenty-five percent of respondents indicated answers in the 'Other' category. After examining commonalities among the responses, it was revealed that these respondents used a variety of rhythmic exercises on non-pitched instruments. They also reported using body rhythms and imitation, as well as individual and group singing exercises and choral warm-ups as an intervention to address fluency. Respondents also reported utilizing spoken text or sung lyrics from musicals or plays, especially for their older students.

Phonemic Awareness

Do music therapists address phonemic awareness in their music therapy interventions? For the purpose of this study, phonemic awareness was defined as the ability to notice, think about, and work with the individual sounds in spoken words (e.g. the awareness that the word 'big' is made up of 3 phonemes - /b/, /i/, /g/). The survey results indicated that 63% of the respondents addressed phonemic awareness in their music therapy interventions.

What music therapy interventions do music therapists use to address phonemic awareness? The top five music therapy interventions respondents used to address phonemic awareness included the use of letter, word, picture, or logo cards to accompany music activities (83%), rhythmic chant of words or text (79%), the use of props, puppets, or play items to accompany song activities (51%), shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words (48%), and the use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There was an Old Lady*) (46%).

Twenty-one percent of respondents listed other music therapy interventions as ways to address phonemic awareness. Several commonalities between music therapy interventions were revealed, and several participants described using rhythm and singing to represent individual phonemes. In addition to using rhythm and singing, respondents incorporated non-pitched percussion, body percussion and piano in these interventions. The participants also reported using rhyming songs and chants to address individual phonemes and phoneme blending.

Phonics

Do music therapists address phonics in their music therapy interventions? For this study, phonics was defined as the relationship between the letters of written language (graphemes) and individual sounds (phonemes) of spoken language (e.g. the recognition that the written letter 'b' makes the sound 'buh'). Seventy-two percent of survey respondents indicated that they address phonics in their music therapy interventions.

What music therapy interventions do music therapists use to address phonics?

The survey results revealed the top five music therapy interventions used to address phonics included the use of letter, word, picture, or logo cards to accompany music activities (85%), rhythmic chant of words or text (71%), shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words (57%), the use of props, puppets, or play items to accompany song activities (51%), and the use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There was an Old Lady*) (50%).

Eighteen percent of respondents reported using other music therapy interventions that were not included in the main list of interventions. Upon examination of the open-ended answers by respondents, there were not many commonalities in contrast to the other aspects of literacy that were surveyed. One commonality indicated by survey results involved singing songs that teach the individual letter sounds (e.g. singing *The Alphabet Song – ABC's*).

Comparison of All Facets of Literacy

The survey results indicated the most addressed facet of literacy was the area of vocabulary, as 98% of respondents answered that they addressed vocabulary within their music therapy interventions (see Table 5). This was followed by comprehension (85%), phonics (72%), and phonemic awareness (63%). Fifty-six percent of respondents answered that they addressed fluency within their music therapy interventions.

Table 5

Facets of Literacy Addressed by Music Therapists

Facet of Literacy	Percent of respondents	
	Yes	No
Vocabulary	98%	2%
Comprehension	85%	15%
Fluency	56%	44%
Phonemic Awareness	63%	37%
Phonics	72%	28%

Summary of which Music Therapy Interventions are Most Frequently Used to Address Sub-areas of Literacy

Table 6 contains the most frequently used music therapy interventions that are used for each sub-area of literacy (vocabulary, comprehension, fluency, phonemic awareness, and phonics). All eleven music therapy interventions that were identified through the literature review and included throughout the survey were used by some portion of the respondents.

The use of letter, picture, word, or logo cards to accompany music activities was reported by respondents as the most frequently used in addressing the sub-areas of vocabulary, comprehension, phonemic awareness, and phonics. Rhythmic chant of words or text was reported as the most frequently used music therapy intervention to address the sub-area of fluency, and was also commonly used to address the sub-areas of vocabulary, phonemic awareness, and phonics. The use of books that are based on songs was frequently reported as an intervention used to address all five sub-areas.

Respondents reported that sequence songs (e.g. *The Green Grass Grows All Around*) were regularly used as a way to address vocabulary, comprehension, and fluency.

Those music therapy interventions that were least used to address the sub-areas of literacy included using sentence strips of lines or lyrics that are placed in order to recreate a song or book, nursery rhymes, and creating or using songbooks that are directly related to the music interventions.

Table 6

Summary of which Music Therapy Interventions are Most Frequently Used to Address Sub-areas of Literacy

	Vocabulary	Comprehension	Fluency	Phonemic Awareness	Phonics
The use of books that are based on songs	78%*	71%*	64%*	47%*	50%*
Shared reading and singing	63%	65%*	61%*	48%*	57%*
The use of letter, word, picture, or logo cards	87%*	81%*	63%*	83%*	85%*
The use of props, puppets, or play items	83%*	73%*	44%	51%*	51%*
Instrument playing cued by a specific word or character in the story	66%	61%	39%	39%	36%
Creating or using songbooks	45%	52%	46%	34%	36%
Sequence songs	79%*	73%*	53%*	31%	32%
Rhythmic chant of words or text	80%*	60%	71%	79%*	71%*
Song-writing or lyric rewrites	63%	60%	51%	30%	34%
Nursery rhymes	58%	45%	39%	34%	35%
Sentence strips of lines or lyrics	33%	34%	28%	19%	22%

* = Included in the top five most frequently used music therapy interventions

Section III: Assessment, Evaluation, and Resources

What sources are available to music therapists to determine whether an individual has difficulties with literacy? Survey results indicated that the most frequently used source for determining whether an individual has difficulties with literacy was a referral from an educator, therapist, or other professional (84%) (see Table 7). The participants also indicated that they utilized the literacy-based objectives from the student's Individualized Education Plan (IEP) (71%), as well as the results from a music therapy assessment (65%). Fifty-eight percent of the respondents indicated they used a parent or caregiver as a source. Thirty-one percent of participants revealed they used results from standardized tests given by a professional, and 23% used results from a non-standardized or self-devised tests.

Seven percent of respondents indicated other sources. Of this group, the most frequently indicated source for determining if an individual has difficulties with literacy was the act of observation in either a non-music setting (e.g. classroom, playground) or music setting.

Table 7

Sources Available to Music Therapists to Determine Literacy Difficulties (n=192)

Sources	Percent of respondents
Referral from an educator, therapist, or other professional	84%
Literacy-based objectives from Individualized Education	
Plan (IEP)	71%
Results from a music therapy assessment	65%
Referral from parent or caregiver	58%
Results from standardized tests given by a professional	32%
Results from non-standardized or self-devised tests	23%
Other	7%

How do music therapists evaluate the effectiveness of music therapy interventions in relation to literacy skills? Receiving feedback from an educator, therapist, or other professional was reported by 77% of the respondents as a way to evaluate effectiveness of music therapy interventions in relation to literacy skills (see Table 8). Sixty-six percent of respondents indicated feedback from a parent or caregiver was utilized as a way to measure effectiveness of music therapy interventions. Respondents also relied on data taken on literacy-based objectives within their music therapy sessions as a measure of effectiveness (63%). Respondents indicated that the comparison of pre- and post-test scores on non-standardized test or self-devised tests (20%) and comparison of pre- and post-test scores on a standardized test given by a professional (13%) were also used to evaluate the effectiveness of music therapy interventions in relation to literacy skills.

Five percent of respondents indicated other methods of evaluating effectiveness of music therapy interventions. Upon examination of these other methods, several music therapists indicated the act of observing their music therapy clients in both music and non-music settings as a way of evaluating the effectiveness of their music therapy interventions. Finally, twenty-three percent of respondents stated that they did not specifically take data on literacy-based objectives within their music therapy sessions.

Table 8

Evaluating Effectiveness of Music Therapy Interventions in Relation to Literacy Skills (n=192)

Evaluation source	Percent of respondents
Feedback from an educator, therapist, or other professional	77%
Feedback from a parent or caregiver	66%
Data taken on literacy-based objectives in a music therapy session	63%
Do not specifically take data on literacy-based objectives in a music therapy session	23%
Comparison of pre- and post-test scores on a non-standardized or self-devised test	20%
Comparison of pre- and post-test scores on a standardized test given by a professional	13%
Other	5%

What resources do music therapists use to gain new skills in teaching literacy?

Eighty-four percent of survey respondents indicated collaboration with fellow educators, therapists, and other professionals was useful in gaining new skills in teaching literacy, and 52% of respondents revealed collaboration with students, parents, and caregivers were also valuable (see Table 9). Respondents also reported attending conference sessions or workshops that were focused on music and literacy (60%), as well as collaboration with other music therapists (42%) who worked with individuals with literacy difficulties proved to be valuable. Reading research in professional journals on the use and effectiveness of music in literacy learning (52%), reading articles or books describing the use of music in addressing literacy skills (48%), and visiting websites to view or download learning materials (44%) were all cited as important to music therapists in gaining new skills. Twelve percent of respondents revealed that watching educational or news programs focused on teaching literacy was helpful in gaining new skills. Six percent indicated other approaches to gaining new skills in literacy teaching, including attending inservices or staff development trainings within their employment setting, as well as taking courses in higher education and writing research focused on the teaching of reading.

Table 9

Resources Used by Music Therapists to Gain New Skills in Teaching Literacy (n=192)

Resources	Percent of respondents
Collaborating with educators, therapists, and other professionals in facility	84%
Attending conference sessions or workshops on music and literacy	60%
Collaborating with students, parents, and caregivers	52%
Reading research in professional journals describing the use of and effectiveness of music in addressing literacy skills	52%
Reading articles or books describing the use of music in addressing literacy skills	48%
Visiting websites to view or download materials focused on teaching literacy	44%
Collaborating with music therapists who work with individuals with literacy difficulties	42%
Watching educational or new programs focused on teaching literacy	12%
Other	6%

What types of music do music therapists use to address literacy skills? Survey respondents indicated using a variety of songs and chants to address literacy skills. Participants indicated using pre-composed, published songs or chants that specifically

address certain literacy skills (e.g. a song written to address phonemic awareness), in addition to using songs or chants that may not specifically address certain literacy skills (e.g. a song used in a music education curriculum). This was also true with therapist composed songs or chants.

Respondents also reported that they presented songs or chants primarily in live form, instead of in recorded form. The respondents also used piggyback songs (e.g. familiar songs where lyrics were modified) to address literacy skills. Several respondents also provided additional types of music in the 'Other' category. They indicated that the adaptation of pre-composed or therapist composed songs or chants to meet the individual's needs at the time were valuable in addressing literacy skills.

CHAPTER V

DISCUSSION

The purpose of this research study was to identify the current trends and common approaches of professional music therapists who incorporate literacy learning into their practice. The study focused on those professionals who reported working in early childhood and school settings. The study sought to determine whether music therapists were addressing specific areas of literacy (vocabulary, comprehension, fluency, phonemic awareness, and phonics) that have been identified through the extant literature. An additional objective was to obtain information about what music therapy interventions were used to address those specific areas of literacy, as well as how the effectiveness of these interventions were measured.

A total of 721 music therapists were invited to participate in the study via an e-mail invitation. After the initial invitations were sent, 47 invitations were returned to sender due to invalid e-mail addresses. An additional six music therapists contacted the researcher and indicated that they no longer worked in an early childhood or school age setting. From the total of 668 possible participants, 228 responded to the survey. There were no reports of participants having trouble accessing or navigating the survey. Nineteen participants indicated that they did not address literacy skills within their music therapy practice, so they were thanked for their participation and excused from completing the rest of the survey. During the course of answering the survey, a total of 17 respondents dropped out and did not complete the survey. The data did not reveal a discernable pattern as to why these participants dropped out, so one can only speculate

the causes of the drop-outs. The survey remained open for a total of two weeks, and at its conclusion, a total of 192 respondents (29%) answered, completed, and submitted the entire survey.

Demographics of Participants

The results of the survey revealed that the participants had varying lengths of experience as a professional music therapist. The majority of the respondents had a total of 1-15 years of experience (65%). When comparing the years of experience data from this study to the years of experience data from the 2007 American Music Therapy Association (AMTA) Sourcebook, the percentage for those who reported having 1-15 years of experience in the AMTA Sourcebook was slightly lower at 58%. Twenty-five percent of respondents in this study reported having more than 21 years of experience, while 33% of AMTA members reported having more than 21 years of experience.

The results of the survey revealed that 47% of the respondents hold a Bachelor's degree, while a slightly higher percentage of respondents hold a Master's degree (49%). When comparing the education level data from this study to the education level data from the 2007 American Music Therapy Association (AMTA) Sourcebook, the percentages are very similar for those who hold a Bachelor's degree. The data for those holding a Master's degree is quite different. This research study had 49% of respondents report holding a Master's degree while the corresponding AMTA data indicated only 21% of music therapists holding a Master's degree. It could be concluded that music therapists working in early childhood or school-age settings may be more inclined to pursue graduate studies. Some music therapists may be required or reimbursed by their

employers to pursue post-graduate studies. In future studies, it would be interesting to examine the types of post-graduate degrees that music therapists in these settings possess.

Survey results also indicated that 24% of music therapists work in many diverse employment settings, not one employment setting. This may imply that music therapists have more and more varied experiences with clientele in a range of employment settings (e.g. early childhood to school age settings to nursing homes to Hospice). Because of the variety of settings that were reported by the respondents, the survey question about the age range of clients was deemed irrelevant. The data received from this question did not reveal any trends or lead the researcher to make any conclusions. In future studies, this question could be omitted completely or could be reworded so that a more accurate picture of age ranges could be obtained.

Location by region or state of the respondents was not requested in the survey. It would have been interesting to investigate if certain areas of the country were addressing literacy as compared to other areas. It is also difficult to determine if the survey targeted a representative population of those music therapists working in the United States.

Facets of Literacy

Vocabulary

A large majority of participants (98%) indicated that they address vocabulary within their music therapy interventions. Compared to the responses in the other sub-areas of literacy studied, this area received the highest positive response. It could be suggested that vocabulary is more easily incorporated into music therapy sessions than other aspects of literacy, as it is often learned indirectly through everyday experiences

with oral and written language (CIERA & NIFL, 2003). Other aspects of literacy may require a more planned and direct approach, possibly making it a more difficult to incorporate into music therapy sessions with ease. Another explanation for the high positive response could be because vocabulary was the very first aspect of literacy that was presented to the respondents within the survey possibly increasing the likelihood of a positive response.

In regards to the music therapy interventions used to address vocabulary, the most frequently indicated were the use of letter, word, picture, or logo cards and the use of props, puppets or play items to accompany song activities. These two interventions have been cited in the literature as effective in addressing vocabulary (Register 2004; Register, 2006; Register, Darrow, Standley, & Swedberg, 2007; Standley & Hughes, 1997). There was also a high response rate in the category of 'Other.' Respondents in this category reported a variety of music therapy interventions, such as lyric analysis and discussion, improvisation on individual sounds, words, and phrases, echo and call/response songs, and sign language. Several respondents also reported using the Neurological Music Therapy (NMT) technique of Rhythmic Speech Cueing as an intervention for addressing vocabulary. It should be mentioned that this technique focuses on the mechanisms of speech in the area of rehabilitation, which could lead to a question about the appropriateness of using this technique in addressing vocabulary.

Respondents also described the use of several non-music materials that were utilized to address vocabulary, including augmentative communication and visuals. The area of vocabulary received the most 'Other' responses than any of the other aspects of literacy. It is interesting to note that throughout the rest of the survey, the number of

'Other' responses gradually decreased. The researcher suspects that since this was the first sub-area of literacy that was presented, the respondents may have been more motivated to provide answers.

Comprehension

Eighty-five percent of respondents reported using music therapy interventions to address comprehension. The most frequently used intervention was the use of letter, word, picture or logo cards to accompany music activities, which was also utilized by Register, Darrow, Standley, and Swedberg in their 2007 study.

Respondents reported several music therapy interventions in the 'Other' category that had not been mentioned in previous literature reviews, including the act of a child first listening to a song or a book, and then having him or her draw about the content of a song or book. During this intervention, the reader has to construct meaning while simultaneously interacting with the text, which the Center for the Improvement of Early Reading Achievement (CIERA) and National Institute for Literacy (NIFL) has stated leads to a purposeful and meaningful reading experience (2003). Another music therapy intervention that was frequently suggested in the 'Other' category included the use of "Wh" questions (who, what, where, when, why). Learning Point Associates (2005) stated that the act of comprehension included understanding the events of the story. By asking "Wh" questions, the reader is able to interpret and construct meanings about the story.

Fluency

Survey results indicated that fluency was the least addressed area of literacy by music therapists. Only 56% of respondents indicated that they addressed fluency within their music therapy interventions. This may be attributed to the fact that fluency is learned later in the overall process of reading. In the hierarchy of learning to read, phonemic awareness and vocabulary are often the beginning stepping stones to learning to read. Based on the literature review, a fluent reader is often free from word identification problems and has a large accumulation of words, so it becomes clear that the mastering of fluency comes later after a student has learned the basics of learning to read (Learning Point Associates, 2005). Since findings from this study revealed that music therapists work primarily with children between the ages of 3-8 years old, it could be inferred that they are primarily addressing the areas of vocabulary or comprehension.

Phonemic Awareness

Cunningham (2007) stated that phonemic awareness is one of the best predictors of success in learning to read. In the present study, 63% of the respondents indicated addressing phonemic awareness in their music therapy interventions. This percentage seems surprisingly low, especially since the percentages for vocabulary (98%) and comprehension (85%) were high. It is interesting to note that there have been several recent studies specifically focused on the effectiveness of music interventions in addressing phonemic awareness. Anvari, Trainor, Woodside, and Levy (2002) examined the link between music perception and phonemic awareness and found that music perception was significantly related to phonemic awareness and early reading ability in

children between the ages of 4 and 5 years old. Lamb and Gregory (1993) and Gromko (2005) also found similar results in their studies on the effect of music on phonemic awareness. Fifty-two percent of the respondents indicated that they read research in professional journals on the use and effectiveness of music in literacy learning. However, it is crucial to note that the above studies do not appear in music therapy journals such as *Journal of Music Therapy* or *Music Therapy Perspectives*, but in psychology and music education research journals. Music therapists may not have access to these specific research journals, thus possibly impeding on the transfer of this specific phonemic awareness research to clinical practice.

It is also possible that the participants may have been experiencing fatigue at this point in the survey. The second section of the survey required the respondents to be careful in reading through and understanding the definitions of the facets of literacy. The researcher attempted to provide brief and concise definitions and examples of the different facets, but the respondents may have experienced difficulties in maintaining concentration or answering the questions to the best of their ability. In future studies, greater care and attention to a possible fatigue factor should be taken into consideration when designing the survey.

Phonics

Seventy-two percent of respondents indicated addressing phonics in their music therapy interventions. It should be noted that a higher percentage of music therapists reported addressing phonics (72%) than phonemic awareness (63%). This is surprising because the effectiveness of music as a means for addressing phonics is not as commonly

researched as the areas of comprehension, vocabulary, or phonemic awareness. This leads the researcher to suspect that there may be limited transfer from research to clinical practice because of the inadequate amount of research on the effectiveness of music on phonics.

In terms of music therapy interventions, it should be noted that there were a smaller number of open-ended responses in the 'Other' category. As a result, there were few commonalities in the respondents' answers, which contrasted with the plentiful shared answers in the other areas of literacy that were surveyed. Perhaps respondents were confused by the definition of phonics that was provided within the survey. For the purpose of this study, phonics was defined as the understanding that there is a relationship between the phonemes (spoken language) and the graphemes (written language). Despite being provided a clear definition within the survey, this still may have confused participants.

Summary of All Facets of Literacy

After examining all the data associated with this study, it appears that there are similarities in the music therapy interventions being used to address all of the sub-areas of literacy. For example, the use of letter, word, picture, or logo cards to accompany music activities was an intervention that was most frequently used to address the sub-areas of vocabulary, comprehension, phonemic awareness, and phonics. As noted in the literature review, this intervention has been regarded as an effective music therapy intervention. The use of props, puppets or play items to accompany song activities was

another music therapy intervention that was commonly used to address several sub-areas of literacy.

Other factors may also need to be considered. The respondents were not asked if these music therapy interventions were necessarily effective, but if they used them. In future studies, it may be valuable to question *why* music therapists use certain interventions. It would be interesting to investigate whether music therapists used the interventions because they were, for example, the most effective, most engaging, most developmentally appropriate, or most age appropriate. As noted in previous research, children learn and comprehend the most when the learning has meaning and when it is engaging. Standley and Hughes (1997) and Mueller (2003) both concluded that music captures children's attentions, creates a pleasurable and fun atmosphere, and can often help them to focus for a longer period of time. All of these examples of how music can be a valuable tool in early childhood or school settings are extremely important for future research as well as the future of music therapy in these settings. Another area that may provide interesting results is to investigate if music therapists consider addressing literacy skills as the primary goal or the secondary goal of their music therapy sessions. This may lead to an even clearer picture of how music therapists precisely address literacy skills within their music therapy practice.

Assessment, Evaluation, and Resources

Based on the survey results, collaboration with educators, therapists, and other professionals seem to be very important to music therapists in determining whether an individual has difficulties with literacy and the effectiveness of music therapy

interventions in relation to literacy skills. Likewise, respondents indicated that collaborating with and receiving feedback from a parent or a caregiver was also valuable. These same results are supported by Register (2002), who found that collaboration offered lasting benefits for all parties involved in the treatment of an individual. The American Music Therapy Association (AMTA) echoes the importance of collaboration within their *Standards of Clinical Practice, Code of Ethics, and Professional Competencies* (2007). These professional documents outline what is expected of a music therapist in a collaborative relationship, including maintaining close communication with other individuals involved in treatment, contributing to the education of others involved in treatment, and defining the role of music therapy within the client's treatment.

When determining a client's difficulties with literacy or the effectiveness of music therapy interventions, an area that is least likely to be used are standardized tests. This may indicate that music therapists are not familiar with the standardized assessment and evaluation tests that are often utilized by other professionals. Another consideration is that a music therapists working in private practice may not even have access to the tests due to availability or cost.

The participants did indicate that they often utilized and took data on the literacy-based objectives from a student's Individualized Education Plan (IEP). This may indicate that music therapists are more comfortable in using the IEP as a tool in determining the effectiveness of music therapy interventions rather than the standardized, non-standardized, or self-devised tests.

In contrast to those who stated that they took data on IEP objectives, 23% of the respondents stated that they did not specifically take data on literacy-based objectives

within their music therapy sessions. While acknowledging that there is not a single instructional method that has been found effective in teaching all children to read, Gambrell, Malloy, and Mazzoni (2007) believe that evidenced-based best practices promote high levels of reading achievement. If music therapists want their music therapy practice to be considered an evidenced-based best practice within literacy learning, they should record their client's data on literacy-based objectives. The need to collect data must also be balanced with a supportive learning environment that offers a child multiple opportunities for talking, singing, playing, interacting with books and literature, making choices, and creating social interactions. For transfer to occur from a music therapy setting to everyday life, these experiences must be meaningful and engaging for the child. Based on the results of this study, it could be suggested that music therapists are on the threshold of further defining their best practices within literacy learning. In the future, it would be interesting to examine exactly why music therapists are less likely to take data in this particular area of music therapy practice.

Recommendations for Future Research

As part of Register's (2001) research, she suggested that music therapists develop a focused and specific curriculum when working in literacy learning. The results from this study may aid a music therapist in building a curriculum and a range of music therapy interventions focused on various aspects of literacy. In addition to indicating which general music therapy interventions they used on a frequent basis, respondents provided more specific resources in the 'Other' categories that they found to be beneficial in addressing certain areas of literacy. Exact resources, such as specific songs, chants,

books, and recordings could be compiled for music therapists to use. In addition to the music-related resources, instructional methods and clinical adaptations could be investigated and collected.

Since respondents indicated that they rarely use standardized tests as a tool for determining difficulties in literacy learning or determining the effectiveness of music therapy interventions, a primer of non music-related standardized tests may prove to be helpful. Several standardized literacy tests were utilized by music therapists and music educators within the extant literature. Providing information about standardized tests such as the Dynamics Indicators of Basic Early Literacy (DIBELS), Peabody Picture Vocabulary Test (PPVT), and Test of Early Reading Ability (TERA-3) may prove to be beneficial for those music therapists working in early childhood and early elementary settings. By providing this general information to music therapists, it will assist in providing information that may not be readily accessible due to availability or cost.

At the time this research was conducted, a curriculum text focused on prereading and writing from the American Music Therapy Association (AMTA) was being compiled. The text was accepted for publication by AMTA and will serve as an informational text and guide for non-musicians who work with young children, such as educators and other paraprofessionals, as well as music therapists. The text will include a compilation of specific music-based interventions and resources.

Another recommendation for future research may be the exploration of one specific area of literacy. This study focused on five sub-areas of literacy, and in the future, it may be more valuable to focus on one specific area. As mentioned in the literature review and discussion, phonemic awareness seemed to be an area where music

interventions have been found to be effective. Even though the survey revealed that there were not as many music therapists addressing phonemic awareness as previously thought, it may be interesting to replicate the survey while asking questions specifically about phonemic awareness. The same could be said about the sub-area of vocabulary, since this area was highly addressed by music therapists.

Implications of the Research

This purpose of this study was to identify the current trends and common approaches of music therapists addressing literacy learning, and it can be concluded that the results of the survey proceeded to do just that. Based on the responses of music therapists who represented diverse professional experiences in a variety of employment settings, the outcomes of the study provide a picture of how music therapists are currently addressing literacy, which interventions they use, what types of music they use, and what resources they use to gain new information about teaching literacy.

This study supports some of the findings from experimental and descriptive research already identified through the literature review. Music and literacy research seems to be a growing topic of interest for music therapists, as well as music educators and other related professionals and therapists. As an example, just from the sharing of this survey, the researcher received numerous requests from respondents to share the final research findings when they became available. It is also clear that music and literacy is a growing topic as evidenced by previous and upcoming major publications by the American Music Therapy Association, as well as increasing research articles, mainstream media mentions, conference sessions and workshops on music and literacy.

Appendix A

Protocol Clearance Form from Western Michigan University
Human Subjects Institutional Review Board (HSIRB)

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board



Date: August 6, 2008

To: Brian Wilson, Principal Investigator
Julie Palmieri, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair *Amy Naugle*

Re: HSIRB Project Number: 08-08-04

This letter will serve as confirmation that your research project entitled "Music and Literacy: Current Trends and Common Approaches of Music Therapists in Early Childhood and School Settings" has been **approved** under the **exempt** 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 that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. 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.

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

Approval Termination: August 6, 2009

Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276

Appendix B

Participant Invitation Letter

Western Michigan University, Department of Music Therapy
Principal Investigator: Brian Wilson, MM, MT-BC
Student Investigator: Julie A. Palmieri, MT-BC

Dear Music Therapy Colleague,

You are invited to participate in a research study entitled, "Music and literacy: Current trends and common approaches of music therapists." This research is being conducted as part of the Master of Music in Music Therapy degree requirement for Julie Palmieri. The purpose of this study is to determine if and how music therapists are addressing specific areas of literacy learning that have been identified through the extant literature. Your participation in this study will also aid in identifying literacy assessment and evaluation procedures by music therapists. Only music therapists who work in early childhood and school settings are asked to participate in this study.

This survey will take approximately 10-15 minutes to complete. Your replies are completely anonymous, and the submission of the survey indicates your consent. Your participation is encouraged, but you may refuse to participate, stop participating at any time, or refuse to answer any question without prejudice or penalty. The survey will remain open until Friday, August 22, 2008.

Please click on the following link to get started:

http://www.surveymonkey.com/s.aspx?sm=X5lXWZmwvDXuN7j19PVPVw_3d_3d

If you have any questions or experience issues with the survey tool, please contact the student investigator, Julie Palmieri, MT-BC at julie.a.palmieri@wmich.edu or faculty advisor, Brian Wilson, MM, MT-BC at brian.wilson@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board (616/387-8293) or the Vice President for Research (616/387-8298) if questions or problems arise during the course of the study.

This consent document was approved by the Human Subjects Institutional Review Board (HSIRB) on August 6, 2008. Do not participate after September 1, 2008.

Thank you for your time in completing this survey.

Sincerely,
Julie A. Palmieri, MT-BC

Appendix C

Participant Survey

**Music and literacy: Current trends and common approaches
of music therapists in early childhood and school settings**

Survey Instrument

SECTION I

1. How long have you practiced as a professional music therapist?
 1-4 years 5-10 years 11-15 years 16-20 years
 21-25 years 26-30 years 30+ years

2. What is the highest degree you have completed?
 Bachelor's Master's Doctorate

3. Which professional credentials do you hold? Check all that apply.
 Board Certified (MT-BC) Registered (RMT) Certified (CMT)
 Other (please specify) _____

4. What is the primary employment setting in which you encounter individuals with special needs?
 Early intervention program (e.g. Head Start, Early On)
 Early education setting (e.g. early childhood center, child development centers)
 Preschool (e.g. for typically developing children)
 Public/private elementary school
 Public/private secondary school
 Private setting (e.g. client's home, music therapy studio)
 Learning center
 Other (please specify) _____

5. What age range of music therapy clients do you see in the above setting? Please check all that apply.
 Birth - 2 years old
 3-5 years old
 6-8 years old
 9-13 years old
 14-18 years old
 19+ years old

For the purpose of this study, the term **literacy** is defined as the ability to use language to read, write, speak, and listen.

6. Do you address literacy skills within your music therapy interventions?
 Yes (*if yes, survey continues*) No (*if no, survey ends*)

7. How long have you used music therapy interventions to address literacy skills with individuals with literacy difficulties?
 1-4 years 5-10 years 11-15 years 16+ years

8. What is the primary employment setting in which you encounter individuals with literacy difficulties?

- Early intervention program (e.g. Head Start, Early On)
- Early education setting (e.g. early childhood center, child development centers)
- Preschool (e.g. for typically developing children)
- Public/private elementary school
- Public/private secondary school
- Private setting (e.g. client's home, music therapy studio)
- Learning center
- Other (please specify) _____

9. What age range of individuals with literacy difficulties do you see in the above setting? Please check all that apply.

- Birth - 2 years old
- 3-5 years old
- 6-8 years old
- 9-13 years old
- 14-18 years old
- 19+ years old

SECTION II

For the next section of the survey, several areas of literacy will be defined and you will be asked to respond to questions about these areas.

Vocabulary is defined as the words (oral or written) that are needed in order to communicate effectively.

10. Do you address **vocabulary** in your music therapy interventions?

- Yes
- No (*if no, proceed to question 12*)

11. If yes, what music therapy interventions do you use to address **vocabulary**? Please check all that apply.

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book
- Other (please specify) _____

Comprehension is defined as the ability to understand and gain meaning from what has been read.

12. Do you address **comprehension** in your music therapy interventions?

- Yes No (*if no, proceed to question 14*)

13. If yes, what music therapy interventions do you use to address **comprehension**?

Please check all that apply.

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book
- Other (please specify) _____

Fluency is defined as the ability to read text accurately and quickly with expression and comprehension.

14. Do you address **fluency** in your music therapy interventions?

- Yes No (*if no, proceed to question 16*)

15. If yes, what music therapy interventions do you use to address **fluency**? Please check all that apply.

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book
- Other (please specify) _____

Phonemic awareness is defined as the ability to notice, think about, and work with the individual sounds in spoken words (e.g. the awareness that the word ‘big’ is made up of 3 phonemes - /b/, /i/, /g/).

16. Do you address **phonemic awareness** in your music therapy interventions?

- Yes No (*if no, proceed to question 18*)

17. If yes, what music therapy interventions do you use to address **phonemic awareness**? Please check all that apply.

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book
- Other (please specify) _____

Phonics is defined as the relationship between the letters of written language (graphemes) and individual sounds (phonemes) of spoken language (e.g. the recognition that the written letter ‘b’ makes the sound ‘buh’).

18. Do you address **phonics** in your music therapy interventions?

- Yes No (*if no, proceed to question 20*)

19. If yes, what music therapy interventions do you use to address **vocabulary**? Please check all that apply.

- The use of books that are based on songs (e.g. *What a Wonderful World, The Wheels on the Bus, There Was an Old Lady*)
- Shared reading and singing which involves the teacher/therapist reading and singing the text of the book while pointing to the individual words
- The use of letter, word, picture, or logo cards to accompany music activities
- The use of props, puppets, or play items to accompany song activities
- Instrument playing cued by a specific word or character in the story
- Creating or using songbooks that are directly related to the music interventions
- Sequence songs (e.g. *The Green Grass Grows All Around, There was an Old Lady*)
- Rhythmic chant of words or text
- Songwriting or lyric rewrites
- Nursery rhymes
- Sentence strips of lines or lyrics that are placed in order to recreate a song or book
- Other (please specify) _____

SECTION III

20. What sources are available to you to determine whether an individual has difficulties with literacy? Please check all that apply.

- Referral from an educator, therapist, or other professional
- Referral from a parent or caregiver
- Literacy-based objectives from the student's Individualized Education Plan (IEP)
- Results from standardized tests given by a professional
- Results from a non-standardized or self-devised test
- Results from a music therapy assessment
- Other (please specify) _____

21. How do you evaluate the effectiveness of music therapy interventions in relation to literacy skills? Please check all that apply.

- Feedback from an educator, therapist, or other professional
- Feedback from a parent or caregiver
- Comparison of pre- and post-test scores on standardized test given by a professional
- Comparison of pre- and post-test scores on a non-standardized or self-devised test
- Data taken on literacy-based objectives in a music therapy session
- I do not specifically take data on literacy-based objectives in a music therapy session
- Other (please specify) _____

22. What resources do you use to gain new skills in teaching literacy? Please check all that apply.

- I read research in professional journals describing the use and effectiveness of music in addressing literacy skills
- I read articles or books describing the use of music in addressing literacy skills
- I attend conference sessions or workshops on music and literacy
- I collaborate with music therapists who work with individuals with literacy difficulties
- I collaborate with educators, therapists, and other professionals in my facility
- I collaborate with students, parents and caregivers
- I watch educational or news programs focused on teaching literacy
- I visit websites to view or download materials focused on teaching literacy

23. What types of music do you use to address literacy skills? Please check all that apply.

Pre-composed, published songs or chants *specifically* written to address literacy skills (e.g. a song that is written specifically for phonemic awareness)

Live Recorded

Therapist composed songs or chants *specifically* written to address literacy skills

Live Recorded

Pre-composed, published songs or chants *not specifically* written to address literacy skills

Live Recorded

Therapist composed songs or chants *not specifically* written to address literacy skills

Live Recorded

Piggyback songs (i.e. changing the lyrics to a familiar song)

Other (please specify) _____

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