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Suzanne Natallia Hall

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To the University Council:

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PREPARING MUSIC PRE-SERVICE TEACHERS TO ENHANCE LANGUAGE ARTS READING SKILLS IN THE ELEMENTARY MUSIC CLASSROOM: A DEGREE PROGRAM AND COURSE CONTENT ANALYSIS

by

Suzanne Natallia Hall

A Dissertation
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

Major: Music Education

The University of Memphis
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nothing is possible. It is in Him that I have become my all and it is He that has given me
the opportunity to live in my destiny.
Abstract

Hall, Suzanne, N. Ph.D. Preparing music pre-service teachers to enhance literacy skills in the elementary music classroom: A degree program and course content analysis. Major Professor: Nicole R. Robinson, Ph.D.

The purpose of this study was to examine how NASM accredited music education degree programs from public and private universities throughout the United States address reading literacy (language arts) integration within the elementary music classroom. Accordingly, the following research questions guided the study:

(1) What, if any, reading course is currently included in the undergraduate music education degree program?

(2) What are the attitudes and perceptions of music education professors towards music and reading integration within the music teacher preparation programs?

(3) What “philosophical lens” is used to develop a reading integrated curriculum for pre-service music teachers and how is it interpreted in practice?

(4) What content and experiences are included within the general music course (or course equivalent) that addresses reading and how is it implemented?

A quantitative descriptive research design was implemented in three phases: conceptual analysis of degree programs curricula, survey, and interviews. A conceptual analysis of music education degree programs was used to examine the presence of reading courses within the music education degree program and under which department the courses are provided (n = 100). A cross-sectional survey was conducted in order to provide a “descriptive” analysis of instructors’ (n = 42) attitudes and perception towards reading/language arts integration within the general music methods course (or course equivalent). A chi-squared analysis determined correlations between teacher
demographics and questionnaire portions of the survey. Interviews of selected instructors (n = 3) were conducted to further detail how reading content is introduced and integrated within the coursework of the general music methods course (or course equivalent), a course that is required by the NASM for music teacher certification.

Results indicated that of the universities/colleges investigated (N = 100) more than half (54%) included a course(s) in reading. Additionally, instructor attitudes showed favorably towards reading integration and a majority of the instructors perceive an awareness of the national reading crisis. However, there were mixed feelings towards the belief that music education teacher training programs should be structured to prepare pre-service music students to support basic reading instruction in the music classroom and instructor confidence in teaching reading integration to pre-service music teachers.

Analysis of interviews revealed consistent themes towards reading integration including preparing pre-teachers music teachers with (1) awareness of key concepts and vocabulary in reading instruction (phonemic awareness, phonics, sequencing, decoding, and comprehension) that was embedded in the course, (2) use of reading strategies, and (3) modeling how integrative strategies are implemented in which students had opportunities to imitate through assignments. Finally, the philosophical lens that guided the instructors in the inclusion of reading integration in the course was integrative in nature.
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Chapter 1

Introduction

The ability to effectively read and write is fundamental to all academic and non-academic learning; thus, these skills are critical to one’s success in both school and life (NAEYC, 1998). Specific measures of proficient levels of literacy and the functionality of literacy have traditionally been ambiguous and difficult because of the misuse or misinterpretation of the term “literacy” (Roberts, 1995; Shi & Tsang, 2008). The term “literacy” is used in a variety of ways depending on the context in which the term is used. Some refer to “literacy” as the “ability to read and write” while others position literacy as “multiple in nature” or multiliteracies (e.g., music literacy, media literacy, healthy literacy) (Kress, 2003; Selber, 2004). Despite efforts to develop a common definition, no consensus among interested parties has been made (Scribner, 1985), therefore, in general, definitions of literacy can be categorized under two basic perspectives: pluralist and Unitarian.

The “pluralist” perspective refers to the comprehensive understanding and possessing of specific approaches and competencies with regard to “reading” and/or “writing” within a specific subject area or mode (e.g., functional, academic, emergent critical, social, musical, survival, computer, religious; Ben-Yosef, 2003; Chall, 1983; Forrest, 2002; Patersson, 1996). In contrast, Unitarian literacy refers to the “ability to read and write,” the knowledge that informs the ways in which we make meaning from text and understand the world around us (Callin 2006; Roberts, 1995). Tilley (1984) further explains that Unitarian literacy includes “those competences [that] any person brings to the tasks of understanding and using what he reads, and conveying what he
means in writing, so that he can engage effectively in those activities [that] he is otherwise equipped to undertake” (p. 13). The Unitarian understanding of literacy is a primary factor of the pluralist mode of functional literacy with regard to the ability to perform various tasks essential for everyday living. However, some experts (e.g., Gray 1965; Hunter and Harman, 1979) maintain that the concept of functional literacy makes sense only with respect to the proficiencies required for participation in the actual life conditions of particular groups or communities. (…) If we were to consider the level of reading and writing activities carried out in small and isolated rural communities as the standard for functional literacy, educational objectives would be unduly restricted. At the other extreme, we might not want to use literacy activities of college teachers as the standard determining the functional competencies required for high school graduation. (Scribner, 1985, p. 10)

Literacy research under the Unitarian philosophy implies that the literacy process is contingent on understanding the specific social, cultural and political context (Forrest, 2002). In other words, literacy is “social and personal and grounded in cultural, social and historical backgrounds” (Ben-Yosef, 2003, p. 81; Powell, Cantrell, & Adams, 2001; Pranskey & Bailey, 2003; Roberts, 1995, Scribner, 1984). For example, socio-cultural differences among culturally and linguistically diverse (CLD) populations and the mainstream culture occur when discussing the function, worth and value of reading skills, specifically among agrarian/industrialized environments and environments of the oral versus literate traditions (Harris, 2003). Each environment brings a different perspective in terms of function, value, and worth of reading skills creating a conflict between the home and school expectations for students (Ben-Yosef, 2003; Harris, 2003; Pranskey & Bailey, 2003). As social practices have varied and evolved over time, so has the nature of literacy to adapt to it (Chall, 1983, Scribner, 1985). Thus, the discourse in establishing
a criterion and assessing persons for literacy levels has been a principal topic in American culture.

This research study focused on the ‘unitarian’ paradigm of literacy as it relates to the pluralist literacy modes of music and reading. Therefore the definition utilized will be that of Scribner and Cole (1981) as “literacy is not simply learning how to read and write a particular script but applying this knowledge for specific purposes in contexts of use (p. 236).

**Historical Context**

Historically, literacy has been used to either maintain hegemony of elite populations and social classes in particular societies or increase participation in social and political aspects (Goody, 1968; Resnick, 1983; Scribner, 1985). On the contrary, contemporary viewpoints see the expansion of literacy skills as a means for “poor and politically powerless groups to claim their place in the world” (Scribner, 1985, p. 12). “During the Colonial and Revolutionary times, studies on adult literacy have used signatures on wills, marriage licenses, military records, or other legal documents to infer the prevalence” (Shi & Tsang, 2008, p. 188) and only included Caucasians over the age of 20 (Horton, 1923). At that time, it was assumed that because of exposure to reading instruction persons were able to sign their name (Lockridge, 1974) and therefore were considered literate. Based on this definition, of the total population ten years of age and older, the number of illiterate individuals declined from 17% in 1880 to 6% in 1920 as indicated by the U.S. Census (Horton, 1923). Other census statistics included:

[...] among the native-born whites—excluding all other classes—there were in 1920 two [percent] illiterates and in 1910 three [percent]. Among the foreign-born white population there were, in 1920, in each typical unselected hundred, 13.1 illiterates. Among the Negroes there were 22.9. (Horton, 1923, p. 108)
During the 19th century, the U.S. Census Bureau began evaluating literate persons through a nationwide sampling survey based on whether respondents could read simple messages in English or in any other language (Stedman & Kaestle, 1987). This self-reported evaluation proved unreliable as people claimed they had the ability to read when actually they could not (Lockridge, 1974). Subsequently, in order to develop a more accurate representation of the societal literacy rate, assessments referenced the number of completed years of schooling in lieu of self-reporting methods. In the 1930s, one was considered a functionally literate individual based on completion of three or more years of schooling (Stedman & Kaestle, 1987). Later, during World War II, a literate person was defined as one who completed a fourth grade education. In 1952, the criteria of functional literacy continued to increase from completion of grade six, to completion of grade eight by 1960 and completion of twelfth grade by 1970 (Shi & Tsang, 2008; Stedman & Kaestle, 1987).

Although this criterion may have seemed to be a systemic approach to determining literacy competency, it also introduced several discrepancies as completion of schooling did not necessarily depict actual estimate of literacy proficiency but created generalizations that were often found to be false (Stedman & Kaestle, 1987). As a result, more formal evaluation of functional literacy began to emerge requesting participants to demonstrate various tasks pertaining to daily life activities. These assessments, conducted throughout the 1970s, were based on the initial research of Buswell in 1937 who asked participants to demonstrate various tasks of daily life such as finding prices in mail-order catalogs and phone numbers in a telephone directory (Stedman & Kaestle, 1987). Coincidentally, his findings suggested that the disparity among the participants’
performance of the tasks was based on the individuals’ education and reading habits. These similar assessments were conducted through various departments (among them, Harris and Associates for the National Reading Council, National Assessment for Educational Progress (NAEP), Department of Education and the U.S. Census Bureau) and expanded the performance tasks to include the ability to fill out applications, read word passages, read reference materials, interpret graphic materials and charts, do problem solving tasks and perform computations as shown in Table 1. Findings were analyzed, documented and recommendations were provided as a solution to the nation’s recognized reading problem through reports such as Toward a Literate Society; from the National Academy of Education’s Reading Committee’s (Chall & Stahl, 1982). One suggestion determined an “essential literacy twelfth grade reading level for today, as an ability to read the New York Times or a newsmagazine such as Time critically and analytically” (Chall, 1983, p. 7).
Table 1

*Progression of Assessments of Functional Literacy of Adult Populations*

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Sample Ages</th>
<th>Task</th>
<th>Criteria</th>
<th>Lower Criterion</th>
<th>Higher Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survival Literacy</td>
<td>1970</td>
<td>16+</td>
<td>Application Forms</td>
<td>70%, 90% correct</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td>Reading Difficulty Index</td>
<td>1971</td>
<td>16+</td>
<td>Application Forms, Telephone: Ads</td>
<td>80%, 90% of weighted items</td>
<td>4%</td>
<td>15%</td>
</tr>
<tr>
<td>Mini-Assessment</td>
<td>1975</td>
<td>17</td>
<td>Everyday Reading</td>
<td>75% correct</td>
<td>12.6%</td>
<td>-</td>
</tr>
<tr>
<td>Adult Functional Reading</td>
<td>1973</td>
<td>16+</td>
<td>Everyday Reading</td>
<td>None set</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Adult Performance Level</td>
<td>1974</td>
<td>18-65</td>
<td>Functional Competency</td>
<td>APL 1, APL 1 &amp; 2</td>
<td>19.7%</td>
<td>53.6%</td>
</tr>
<tr>
<td>English Language Proficiency</td>
<td>1982</td>
<td>20+</td>
<td>Multiple Choice form Applications, Official Notices</td>
<td>20 of 26 correct</td>
<td>13%</td>
<td>-</td>
</tr>
<tr>
<td>Young Adult Literacy</td>
<td>1985</td>
<td>21-25</td>
<td>Prose Comprehension, Documents, Quantitative, Oral Language</td>
<td>None set</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Results of these nationwide assessments produced concern as a large percentage of the adult population demonstrated serious deficiencies in reading ability. By 1975, Secretary of Education, Terrel Bell stated that “63 million Americans aren’t proficient in meeting the educational requirements of everyday adult life. By 1982, he noted this had risen to 72 million, which amounted to half the adult population” (as cited in Stedman & Kaestle, 1987, p. 9). Consequently, massive amounts of grant funding became available for research in reading and numerous programs were implemented to assist in improving literacy of children and adults including Head Start, Title 1, National Right to Read Effort, and Reading is Fundamental (Chall, 1983; Stedman & Kaestle, 1987). This national effort agreed that increasing literacy would ensure individual opportunities for personal fulfillment and participation in society, improve economic productivity, and strengthen the nation’s competitiveness in the global marketplace (Kirsch, Jungeblut, Jenkins, & Kolstad, 1993).

In 1990, governors from across the nation met in a historic education summit and established National Education Goals, whose main objective was to transition the United States society into the 21st century. Among the goals, number six states “by the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship” (Kirsch et al., 1993; Mikulecky, 1990, p. 304). The following year, Congress passed the National Literacy Act, which defined literacy as “an individual’s ability to read, write, and speak in English and compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one’s goals, and to develop one’s knowledge and potential” (Brown, Prisuta, Jacob, & Campbell, 1996, p. 2).
Additional skills and tasks associated with work, home, and community circumstances were included to expand the initial definition of literacy beyond one’s ability to read and write.

Currently, the United States evaluates levels of literacy among three primary domains: *prose*, the ability to read printed information (e.g., reading newspapers or finding a piece of information), *document*, the ability to fill out forms and applications, (e.g., maps, payroll forms, bus schedules), and *quantitative*, the ability to perform basic arithmetic (e.g., in balancing a check book or calculating the amount of interest for a loan) (NCES, 2005). In 2002, The National Center for Education Statistics implemented a study designed to determine the literacy rate of American adults based on these domains. Results indicated that out of five levels of literacy, one being the lowest, approximately 30% of the United States population functioned with approximately a level three proficiency in reading, which signifies that 61 million adults can only functionally read and write. Additionally, “between 40 and 44 million adults nationwide demonstrated skills in the lowest literacy level defined” (Kirsch et al., 1993, p. 16), an increase of 10 million people from that which was documented 20 years earlier (Stedmen & Kaestle, 1987).

Further evaluations on adult literacy have concluded that reading levels indicate little improvement since 1992 in which 45 million adults were marginally illiterate and 21 million adults were completely illiterate (National Institute for Literacy Statistics, 2001). Such figures typically increase in large metropolitan areas in which nearly half of the adult residents lack adequate reading skills necessary for acquiring jobs or job advancement within the workplace (Banovetz, 2000). These statistics conclude that
although all Americans typically have skills and/or knowledge in literacy, evidence indicates that many were found to be illiterate in regards to competing in society, triggering a “reading crisis” (Gee, 1999).

As the United States continues to become a technological society, the demand for higher literacy is ever increasing. As a result, there has been a national charge to foster and develop a more literate, more competitive society. A “large portion of our population lacks adequate literacy skills and has intensified the debate over how this problem should be addressed” (Kirsch, Jungeblut, Jenkins & Kolstad, 1993, p. xii). This concern has plagued the United States for decades and as the number of illiterate individuals continues to rise, more focus has shifted toward fixing societal literacy problems through the U.S. K-12 education system. However, “current systems of education and training are inadequate to ensure individual opportunities, improve economic productivity, or strengthen our nation’s competitiveness in the global marketplace” (Kirsch et al., 1993, p. xii).

One of the first assessments of reading ability in public school systems began with statewide and national “then-and-now” studies. These assessments, implemented as early as 1906, served to measure the literacy rate of the current academic year as compared to the academic rates of previous years in an effort to determine national trends (Stedman & Kaestle, 1987). The first of such methods was performed in Springfield, Massachusetts in which ninth grade students were given the same spelling, arithmetic and geography test as ninth grade students in 1846. Results indicated that the students academically did not perform much better than in those in 1846 (Farr, Tuinman, & Rowls, 1974). Due to the inherent problems with the use of such studies, new methods of
assessments were developed. During the mid 1900s, state achievement tests structured to determine literacy achievement at various grade levels began to emerge nationwide as a result of policies that called for accountability, one of the most prominent being Goals 2000, which included the initial National Goals for Education developed in 1990.

Although there has been progress during recent years in addressing reading concerns among young children (Hock et al., 2009; McCardle & Chhabra, 2004), recent adolescent literacy statistics suggest that “more than eight million adolescents have not mastered the reading skills necessary for them to successfully respond to the demanding secondary school requirements or compete for meaningful jobs in the workplace” (Hock et al., 2009, p. 22). A 2001 report from the National Institute for Literacy concluded that 37% of fourth graders and 26% of eighth graders could not read at grade level and that one-fifth of high school graduates could not read their diplomas (National Institute for Literacy Statistics, 2001). Haycock (2001) reported that by high school graduation, approximately 1 in 17 seventeen-year olds could read and process information from specialized texts, such as the science section in the local newspaper. Demographically, this represents approximately 1 in 12 Whites, 1 in 50 Latinos, and 1 in 100 African Americans. The National Assessment of Educational progress also reported that 26% of eighth grade students were unable to read necessary material for daily life activities such as road signs, newspapers, or bus schedules and overall, 68% of students scored below proficient levels in reading (NCES, 2005).

Ultimately, if reading difficulties are not addressed for students who are unable to manage the necessary skills and requirements of high school and post secondary education, such issues will continue through adulthood. These same individuals will be
less prepared to face the demands and challenges of the global economy (Friedman, 2005). Although the reading crisis is a national concern, the problem is magnified in the urban school settings as these districts continue to perform at a substandard level compared with their non-urban counterparts in reading as assessed in grades four and eight (Hannaway, 2005; Lutkas, Rampey, & Donahue, 2006). The “performance gap,” which indicates disparities in academic achievement in reading and math between Caucasian and minority students continue to plague elementary schools today (Burt, Orlieb, & Cheek et al., 2009; Kindall-Smith, 2006; Lankford, Loeb, & Wyckoff, 2002; Ladson-Billings, 1992; Teale & Gambrell, 2007). The sheer magnitude of this issue for students in poor urban high schools is even grimmer. “In some of the largest urban school districts in the United States, nearly 65% of adolescents read below the “satisfactory” level on state reading assessments (Hock et al., 2009, p. 22).

To address the reading dilemma, the Federal Government incorporated laws that include aggressive reading (K-12) assessments in hopes to increase the number of literate individuals. For example, the No Child Left Behind Act (2001) was established to ensure every child attains grade level standards in reading/language arts and mathematics. Included in the bill are specific requirements for statewide standards and assessment systems for states. It also requires states to implement yearly assessments in reading and math at three grade levels, and mandates states to develop and implement accountability plans to increase student achievement. Such mandates require educators to be more accountable (Register, Darrow, Standley, & Swedberg, 2007) in teaching and assessment, challenging them to intervene, motivate, and increase the reading ability of struggling readers. Struggling readers include, but is not limited to, students who may exhibit a
limitation in the following characteristics: background experience; oral language; decoding (including phonemic awareness and phonics knowledge); fluency; oral, reading, and writing vocabulary; comprehension; maintaining attention; motivation (Register et al., 2007; Cooper, Chard, & Kiger, 2006).

**Reading in Schools**

“Although reading and writing abilities develop over many years, the early childhood years, from birth through age eight, are critical for “emergent literacy skills’ development” (NAEYC, 1998, p. 1). More recently, level of reading ability has been determined through demonstration of emergent and conventional reading skills.

According to most definitions, emergent reading skills involve skills, knowledge, and attitudes that are developmental precursors to conventional forms of reading and writing. These skills (phonological awareness, print knowledge, and oral language) constitute the basic building blocks for how students learn to read and write (Farver, Nakamoto, & Loniga, 2007). Once emergent literacy skills are mastered, a reader progresses to “conventional literacy.” Conventional literacy is defined as reading, writing, and spelling text in a conventional manner. McGee and Richgels (1996) describe the use of conventional literacy as the ability for readers and writers to communicate (read and write) in ways recognized as “really” reading and writing. For example, the reader can use various reading strategies, know hundreds of sight words, read texts written in a variety of structures, is aware of the audience, monitors his/her own performance as a writer and reader, and spells conventionally.

The ability to comprehend a variety of texts requires sophisticated comprehension and study strategies, reading critically, and developing a lifelong desire to read that must
extend beyond those primary years. Young readers must get off to a good start in reading with strong fundamentals; however, in order to produce confident readers, continued and systematic instruction in reading must continue throughout the K-12 academic experience (NAEYC, 1998).

With a growing number of deficient readers, schools are finding alternate solutions to providing intervention including using arts specialists to assist the push to increase literacy achievement. Adversely, educators from all content areas are at risk of being cut in order to make additional time for reading, writing, and math intervention (Abril, 2006; Hinde et al., 2007). Wiggins (2001) suggests more integrated and interdisciplinary instruction may be necessary as educators urgently continue to search for successful remediation and intervention models to increase reading. Research studies in regards to reading literacy integration occurs in all core subjects (Boyle-Baise, Hsu, Johnson, Serriere, & Dorshell, 2008; Burger & Winner, 2000; Hinde et al., 2007; Patrick, Mantzicopoulous, & Samarapungavan, 2009) as subject areas are at risk of reduced teaching time and/or even elimination in replacement of more reading intervention (i.e., science, visual arts, geography and social studies).

Because so much money is at stake, school district after school district is reducing the time given to other subjects in K-8 so as to intensify the teaching of reading and math, which alone are tested under the provision of NCLB [No Child Left Behind]. History, civics, geography the social studies in general, and the arts are being virtually wiped out. (Rabb, 2004, p. 1)

Conversely, some arts programs are being seen as vital in reversing this crisis and having a positive influence on academic success in reading. An evaluation of 13 schools in the Milwaukee Public School system revealed that 100% of students were at reading level proficiency. These schools called “90/90/90” schools are those where more than
90% of the student population is (1) eligible or receive free or reduced lunches, (2) are of an ethnic minority, and (3) have met or achieved high academic standards on independently conducted tests (Reeves, 2005). Strategies implemented in these schools incorporated integration on the part of music educators that contributed to the overall success of the students (Reeves, 2005).

It is noteworthy that the schools that had the greatest gains did not eliminate special area courses, such as music, art, physical education, and technology. Rather, these courses were explicitly part of the academic preparation of every student […]. Each of these teachers incorporated some of those language arts and math standards in their daily lessons. (Reeves, 2005, p. 381)

The use of integrated instruction appears to increase motivation (Miller, 2003; Patrick et al., 2009) and reading comprehension (Hinde et al., 2007; Register et al., 2007) however concerns remain with regards to the retention and sustainability of the content knowledge of each subject included in the integrative process (Boyle-Baise et al., 2008). Integrated instruction is often misinterpreted as only using music and arts to illustrate or reinforce concepts from other disciplines; however, true integrated instruction occurs when content from one subject area is utilized within another subject area while maintaining the context and integrity of the integrated content (Bunaford, 1993; Kindler, 1987). Cornett (1999) asserts that the arts provide “a neutral ground to learn about varied and multiple communication symbols, content disciplines, skills, histories, values and beliefs” because the arts transcend all cultures and time periods (p. 5). The arts also assist in developing creative ways of thinking about questions and problems and provide a perspective beyond learning isolated facts (Boyer-White, 1988). Reading literacy researchers support the inclusion of reading literacy in other content areas because in doing so there is the ability to enhance reading comprehension (Hinde et al., 2007).
Duffy et al. (2003) claims that when there is an absence of other content areas (e.g., social studies, arts, science) within the academic curriculum, reading achievement is negatively impacted.

Research continues to document the influence of music on academic achievement (Costa-Giomi 1999, 1995; Huang, 2004; Lowe, 1995; Lynn, Wilson, & Gault, 1989). Other scholars are examining the effects of music instruction in its ability to assist, enhance and teach essential reading components (Register et al., 2007). However, an inherent concern arises in regards to whether the studies provide specific attention to maintaining the “independent” integrity of each academic subject area integrated and whether they ensure that reciprocal learning occurred. Some music educators express concern about whether the integrity of music is maintained when integrated with core academics (Barrett, McCoy, & Veblen, 1997; Veblen & Elliot, 2000). Others share multiple perspectives and approaches on how to integrate the arts with core academic subjects (Colwell, 2008). Overall, “music educators continue to struggle with the sometimes contradictory philosophies of the study of music for its own sake versus the study of music in support of other nonmusical skills” (Hansen & Bernstorf, 2002, p. 1). Albeit the many diverse values and beliefs on the role of music education in assisting reading instruction, there is evidence that music parallels reading and can therefore serve as a valuable source of support for attaining reading literacy for all students (Hansen & Bernstorf, p. 2002)
Purpose of Study

O’Brien and Stewart (1990) found that in-service music teachers felt inadequate in teaching reading skills because of the lack of instructional materials, insufficient training, and inadequate classroom teaching time available to incorporate language arts skills effectively and efficiently during music class while simultaneously providing music instruction. Additionally, teachers felt a strong loyalty toward just teaching their own content area. Barry, Taylor, and Hair (2001) surveyed state board members of the Music Educators Association (N = 544) in regards to their attitudes toward music education research. Responses indicated the need for music research to focus on advocacy, instructional strategies/pedagogy and teacher training. In particular, concerns arose about the need for more studies linking music with brain development to demonstrate the strength and necessity of music in hopes to sustain music programs. Other scholars offer suggestions for research inquiries including the inclusion of music with other disciplines [interdisciplinary studies] (Barry et al., 2002; Ross, 1995). With a nation at-risk of becoming “illiterate” (Stedman & Kaestle, 1987), interventions that seem out-of-the-box should be explored and researched to determine whether interventions, such as integrative strategies, may assist in diverting this developing epidemic and how to prepare pre-service music teachers to use this knowledge in the music classroom.

The purpose of this study is to investigate reading-integrated music strategies that can serve as a model for music educators in an attempt to alleviate the hesitation and concern when faced with the task of assisting in literacy intervention, specifically, pre-service music teachers.
Research Questions

The guided research question for this proposed study will be: in what ways do NASM accredited universities/colleges prepare pre-service elementary music teachers to integrate language arts reading skills in the music classroom? Accordingly, the present study is designed to answer the following questions:

(1) What, if any, reading course is currently included in the undergraduate music education degree program?

(2) What are the attitudes and perceptions of music education professors towards music and reading integration within the music teacher preparation programs?

(3) What “philosophical lens” is used to develop a reading and music integrated curriculum for pre-service music teachers and how is it interpreted in practice?

(4) What content and experiences are included within the general music course (or course equivalent) that addresses reading and how is it implemented?

Theoretical Framework

Establishing the theoretical framework of a study provides opportunity for the researcher to reflect on his/her personal stance and how it relates to the broader discussion of the topic. “One’s theoretical perspective influences the types of research questions that are asked, the way data are collected, and the manner in which data are interpreted” (DeCuir-Gunby, 2008, p. 127). The theoretical framework for this study is that of interdisciplinary instruction.

Interdisciplinary instruction. This contemporary approach developed out of the progressive education movement in the early 20th century, in which philosophers encouraged a child-centered approach to learning with emphasis on creative, “natural”
learning experiences with real world outcomes (Ellis & Louts, 2001). Interdisciplinary education seeks to identify authentic relationships among disciplines that would have a positive effect on teaching and learning and allow students to learn content knowledge and academic concepts through use of several cognitive and experiential viewpoints in order to increase the level of relevancy when connected to real life circumstances (Burton, Hurowitz, & Abeles, 2000; Cosenza, 2005; Ellis & Fouts, 2001; Flint 2000). Harris (2003) states that such interdisciplinary courses “teach students to recognize contrasting perspectives, to synthesize disparate material, to think critically, and to re-examine previously held views” (p. 196).

Interdisciplinary instruction is a recurring educational concept that has once again become popular (Colwell, 2008; Snyder, 2001; Wiggins, 2001). The approach, which is primarily used in the elementary grade level curricula, eliminates a uni-mode way of instruction and bridges the gap between disciplines and “encourages discipline specialists to work together, while maintaining the integrity and authority of their particular field of expertise” and provides students multiple ways to construct knowledge (Colwell, 2008; Krug & Cohen-Evron, 2000; Price & Burnsed, 1989; Register, 2001).

Gardner’s social-cultural theory of Multiple Intelligence contributes to the increased use of interdisciplinary studies as his theory suggests that students are able to demonstrate at least seven intelligences, “forms of knowing or ‘information-processing’” (Cosenza, 2005; Gardner, 1989, p. 74). These intelligences include linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal and make use of the natural aspect of academic subjects such as math, science, language arts, music, etc.
The theory of multiple intelligences was designed primarily based on two premises: (1) to synthesize a diverse set of findings about human cognition into a form that made neurobiological and cultural sense; and (2) to provide a way of thinking that contrasts with the widespread belief in a single intelligence, which can be adequately assessed by paper-and-pencil “intelligence tests” (Gardner, 1989, p. 74). Originally a psychological theory, the multiple intelligence theory was quickly adopted by educational practitioners as an approach to instruction. After multiple analyses and examination of various experiments questioning the theory applied in educational settings, Gardner more clearly identified the use of his theory as a “deep” application that entails “multiple entry points to important concepts so that learning opportunities are maximized for every child” (Gardner, 1995, p. 16).

Use of interdisciplinary instruction through integrative curriculum designs has flourished within U.S. K-12 education (Cosenza, 2005). Emerging from this paradigm are various approaches and models that have been widely used in school systems across the United States (Drake, 1998). In some approaches to interdisciplinary studies the levels of connection among disciplines are often determined by “how closely the disciplines bond in the interaction, and what is produced as the result of this bonding” (Svetlana, 2006, p. 253).

Gardner’s theory has led to an emphasis on arts integration as a supportive tool in assisting academic subjects, implying that such basics of scholastic understandings can be approached and used through arts content. The use of integrative strategies has been widely accepted as a curriculum component in many methods courses required for pre-service teachers (Colwell, 2008). Professors of various discipline areas are seeking ways
to prepare pre-service educators to include reading within their specific content areas (Fleming et al., 2007).

**Significance of Study**

This study will contribute to the research literature of music education and its ability to approach music and reading literacy learning through a different viewpoint. This study will also provide a curricular framework in regards to bi-directional learning; how music instruction can be utilized to enhance reading while simultaneously reading instruction can be used to enhance music skills. This research will demonstrate the benefits of bi-directional instruction between classroom and music educators. As states continue to eliminate arts programs, this study will validate the necessity of music programs and the natural use of reading skills in which students can develop in a different setting.

**Limitations of Study**

Limitations of the present study include: (1) the limited focus on literacy as a broad entity and (2) non-responses. Results will provide a “pictorial view” in regards to literacy integrated programs that prepare music pre-service teachers to integrate reading skills in the music classroom. The author acknowledges that there are universities that may use reading-integrated strategies that are worth investigating. However, these universities are not included due to the fact that only those that were National Association of Schools of Music (NASM) accredited in pre-determined geographic locations will be investigated.

Secondly, due to time constraints it is not feasible to discuss the scope of topics and concepts that encompass the language arts field of study. The author will focus on
basic evidence of language arts strategies. Therefore, no one specific form of language arts instruction/approach will be investigated. Additionally, a longitudinal qualitative approach is the most favorable research design to investigate integrative strategies currently in use as it would allow the researcher to be immersed in the setting to document first-hand accounts through extensive observations and interviews. Due to the geographical spread of participants, it was beyond the researcher’s ability to implement such a design within the time frame of the study.

Finally, the researcher will set a 30 to 35% response rate for the data collection of phase two (surveys). It is acknowledged that the researcher has no control over this percentage and that it could pose the limitations of non-response errors. Reasons for non-response can include but are not limited to: unreturned questionnaires or inactive email addresses.

**Operational Definitions**

The following terms are defined as to how they will be used in the context:

*Literacy:* Learning how to read and write and applying this knowledge for specific purposes in contexts of use (Scribner and Cole, 1981, p. 236).

*Transfer:* Serpell et al. (2006) defines transfer as “the ability to apply knowledge gained in one domain or context and apply it elsewhere” (p.1).

*Integration:* Integration is the process of uniting with something else, to coordinate and/or blend to create a unified whole.

*Interdisciplinary:* Interdisciplinary is the field of study which crosses between academic disciplines through use of integrative strategies.
Auditory processing: Auditory processing is the process between hearing and listening. In relation to reading the auditory process is phonemic awareness.
Chapter 2

Review of Literature

Historical Overview of Music and Reading

Music and reading have a shared history that can be traced back to early Chinese and Greek education systems. The first contextual use of music in such education systems is recorded in 5 B.C. (Abeles, Hoffer, & Klotman, 1995). At that time, the primary purpose of education was to produce successful members of society, which was believed to be obtained through the development of a sound mind, body and soul. Educating these three principal entities required a balance of specific instruction. Greek philosophers arranged for rhetoric to develop the mind, eurhythmics to develop the body and music to develop the soul (Abeles et al., 1995). As discussed in Plato’s Doctrine of Ethos and emphasized in Chinese works such as Yue Ji and the Yue Shu, music had the direct power to influence the soul. “Music in both cultures was considered an important means for a proper education and a powerful tool for cultivating and controlling the people of a nation-state. In both cases, the power of music was further connected to the way the universe works” (Wang, 2004, p. 90).

In effort to formalize education, the Greeks developed an infrastructure comprised of two parts: Quadrivium and Trivium. Quadrivium, deemed the higher studies, included arithmetic, geometry, music and astronomy; the Trivium, the lower studies, included grammar, dialect, and rhetoric. Together they exemplified a complete education. Music, therefore, was classified among the top seven valuable components of a man’s education (Rodean, 1965).

As immigrants of the European system traveled to the New World, seeking religious freedom, they brought with them the traditions of the system. Traditions and
philosophies of the Greek system were incorporated into the early colonial period in which the crux of educational practice concentrated on developing individuals in attaining skills that would make them self sufficient and successful attributors in society (Labuta & Smith, 1997; Mark, 1999). As a result, education through religion became the dominant education system. Religious based curricula were established to emphasize “religion and civic instruction” (Labuta & Smith, 1997, p. 5). Therefore, it is interesting to note that both the education systems of reading and music were based solely on religion.

Early reading instruction began as the result of educating the population in the contents of the Bible. Up until 1744, when John Newberry opened a bookstore in England that sold books for children that were shipped around the world, “children had been given chapbooks (crudely printed little books sold by peddlers or chapmen), battledores (folded sheets of cardboard covered with crude wood cuts of the alphabet or Bible verses) or hornbooks (small wooden paddles with lesson sheets tacked on with strips of brass and covered with a transparent sheet of cow’s horn” (Galda & Cullinan, 2006, p. 13). The first public music education system occurred in singing schools “in response to the outcry about the deteriorating and degradation of the hymns, which contradicted the Massachusetts School Law of 1648, which in part demanded instruction on the principles and foundations of religion in which the singing of praises was an integral part” (Mark, 1978, p. 4).

Evidence of the first infusion of reading and music came from within the singing schools. In response to the lack of musical and literate skills of people when attending services, John Tuft wrote An Introduction to the Singing Psalm-Tunes that “encouraged
singing by note as the only acceptable way of praising God. To simplify music reading, he replaced note heads with the first letter of each syllable in the four-note gamut (mi, fa, so, la) and used various punctuation marks after notes to indicate their duration” (Mark, 1978, p. 10).

These practices continued through the time of Horace Mann and his contemporaries who maintained the philosophy of education being used to create a perfect society wherein music was equal with all subjects and was considered a vital part of education. In 1837, Mann served on the Massachusetts Board of Education and was instrumental in the move toward regenerating society by mandating schools to be “free, financed by local and state government, […] mixing all social groups under one roof, […]” (Labuta & Smith, 1997, p. 15). Regarding reading instruction, Mann also began advocating for changes in reading instructional methods and observed that children needed to read materials that were of interest to them; he promoted use of whole words. Contrary to this approach, advocates including Pollard developed and promoted an intensive phonics approach to reading instruction.

In the music education arena, Lowell Mason, known as the father of music education, pushed to include music in the educational curriculum developed by the Boston Public School Committee. “The School Committee report that recommended the addition of music in the schools justified the action with three reasons: music, like other school subjects, had to meet the criteria of being intellectually, morally, and physically beneficial to children. The report explained at length how music was beneficial for children in each of the three realms” (Mark, 1978, p. 6). In 1838, Mason developed the first music education program in Boston to reflect the initial philosophy of the Greek
System of educating the mind, body and soul. His vision continued through the Civil War and spread nationally.

The introduction of integrated curricula first appeared in the late 1800s as a result of concerns facing education including what content to be taught with the vast amount of knowledge available and how schools could help in cultivating moral character.

Whereas shaping pious and virtuous individuals had been the foremost educational goal in the seventeenth century, school in the eighteenth century focused on meeting immediate societal goals and began to respond to the concerns, needs, and values of specific ethnic and cultural groups. (Labuta & Smith, 1997, p. 9)

Such questions posed even more concerns including the varying definitions of integration, how school experiences can and should be related to life. By 1900, the progressivism movement emerged in education. Dewey and his contemporaries advocated what became key approaches of progressivism as the scientific method, the experience curriculum and the activity methods (Wraga, 1997). The movement called for a student-centered approach to making learning meaningful. Students would experience learning through problem solving experiential activities that related to life. His vision led to the opening of the University of Chicago Elementary School, the haven where he put his educational theories to practice. His focus was to unify the curriculum by establishing connections between its components and the school’s connection to society (Wraga, 1997).

As a result, all subjects including music and reading focused on developing curricula that included meaningful experiences. Interdisciplinary curricula began to be explored in order to connect learning to life experiences. “Notable efforts to develop interdisciplinary curricula during the 1930s included curriculum projects led by Hollis
Courses were centered on personal and social problems. Similar projects were pursued in Kentucky, Arkansas, Texas, Georgia, and Tennessee that included theories of the progressive movement. By 1935, the Society for Curriculum Study developed a Committee of Integration composed of leaders in the fields of art, biology, philosophy, psychiatry, psychology and sociology. These leaders were charged to (1) explore the meaning of integration through varying perspectives and (2) account for the application of integrated curriculums in schools and colleges. The final report *Integration: Its Meaning and Application* discussed the philosophical, biological, psychological, aesthetic and educational dimensions of integration (Wraga, 1997) and described and evaluated integrative practices within various types of school curricula. Additionally, Hopkins (1937) investigated integrated programs across the country. A nationwide survey calculated that approximately 80% of schools in the U.S. had some form of interdisciplinary curriculum currently in use. It is important to note the definition of integration used in this case. The term “integration” was used to designate intelligent behavior and the integration process occurred was through an interrelated continuum and adjustment of the behavior. For example, the study of the human body is the framework from which all human activities are derived (Hopkins, 1937). Ultimately, courses were geared to aid student behavior in the classroom as well as in life outside of school. However, Hopkins did note differing of opinions with regards to the terminology in the field.

This movement did not come without resistance from the dominant philosophy of essentialism whose proponents believed in education with separate subjects (Wraga, 1997). A portion of this vision excluded societal leaders speaking on the behalf of music.
education as a source of an influence upon society; rather music philosophers and musicologists began to advocate music for the sake of music. “Those people who left writings about the role of music education, who explained to us why music education was important to their societies, were not music educators. Their concerns were usually related to the preservation and advancement of their own societies” (Mark, 1999, p. 8).

At this point, the rift between music as an educational tool or as an aesthetic component of singular impact began to develop.

As the United States became more diverse, the elitism of the European education model, which included music as a primary component, began to deteriorate. The transition from a societal centered education began in the 1950s with the development of a new aesthetic philosophy (Miller, 1966). Here grew a shift of the function of education as a whole. No longer was the focus dominated by the creation of a society, but rather a focus on the needs of society.

With the long, drawn-out decline of progressive education and its final gasp in the early 1950s, there was no longer a philosophy of education that embraced all curricular subjects. Gone was the concept of an overall curriculum in which each subject played a contributing role. Instead, each discipline had to justify its own place in the curriculum. (Mark, 1999, p. 12)

Mark (1999) suggests three reasons for the shift in the educational purpose that quickly caused a separation of music as a curricular component: (1) elitism of musical works, generally from European descent, and its impact on human wholeness dissipated. The growing “melting pot” of the United States could not hold to such a narrow point of view. Music education was purposed to bridge understanding and respect for all cultures; (2) the notion that music can impact the soul was rejected. Instead of music affecting a person’s soul, musicologists contradicted this effect as simply “music sounds the way
emotions feel” (Pratt, 1947, p. 68); and (3) music’s purpose was strongly embedded in performance. These rationales simply did not meet the needs of society at the time (Mark, 1999).

During the 1950s the Sputnik crisis led to the decline of integrated approaches. The crisis brought education into a more rigid discipline-based approach with emphasis on science and math. Further diversions during the 60s and 70s contributed to the renewed commitment to separate subject disciplines as a result of the National Science Foundation projects initiated by the Cold War and the “back to basics” movement spawned by educational cut backs (Wraga, 1997).

The revival of integration resurfaced in the 1960s as concerns for student achievement focused on student experiences (Bresler, 1995). Through implementing an integrated curriculum, students are “encouraged to integrate learning experiences into their schemes of meaning to broaden their understanding of themselves and their world” as well as engage in “seeking, acquiring, and using knowledge in an organic – not artificial way” (Beane, 1995, p. 642).

All subjects were encouraged to be integrated. Music was a vehicle in understanding culture and its approach shifted to include active experiences (Miller, 1966) instead of a central focus on intellectualized concepts of music understanding. However, with concerns of the growing number of functionally illiterate individuals, focus on providing intensive reading instruction also became of societal interest. As the population continued to grow so did the number of diverse learners, some with reading difficulties. The urbanization phenomenon brought about a unique mixture of various cultures including African Americans, American Indians and Latinos (Hummel, 1973),
populations that bring with them linguistic issues that may or may not cause deficiencies in reading.

Experienced teachers throughout the United States report that the children they teach today are more diverse in their backgrounds, experiences, and abilities than were those they taught in the past. Classes include both children with identified disabilities and children with exceptional abilities, children who are already independent readers and children who are just beginning to acquire some basic literacy knowledge and skills [...]. Diversity is to be expected and embraced, but it can be overwhelming when teachers are expected to produce uniform outcomes for all, with no account taken of the initial range in abilities, experiences, interests, and personalities of individual children. (Neuman, Copple, & Bredekamp, 2000, p. 2)

Consequently, a shift toward more instruction in reading, including the integration of reading within other subjects became a priority. Specialists in the field of music and language arts who have examined correlations between music and reading believe that the integration of music within the literacy learning setting may perhaps assist in increasing both music and language development (Wiggins, 2001). According to Diamantes, Young, and McBee (2002), “music teachers can aid in teaching skills necessary for reading such as left to right progression in reading and writing, phrase reading, rhythmic eye movement, and concrete understanding of [teams] such as high, low, loud, soft, short, long, etc. Music enriches the vocabulary, teaches articulation, and pronunciation. It requires attention to detail, neatness, and precision in writing” (p. 116). As classroom teachers focus on developing reading literacy among their students, likewise music educators strive to have their students become musically literate.

Parallels between Music and Reading

There is a growing body of knowledge in the field of music education that details the parallels between music and reading (Anvari, Trainor, Woodside, & Levy, 2002; Butzlaff, 2000; Gromko, 2005; Hahn, 1987; Lloyd, 1978; Register, 2001). Many include
studies which use empirical methods (Atterbury, 1985; Gromko, 2005; McMahon, 1979), however, the majority of the discussion available is based on observations. This section of the literature review will elaborate this very important conversation.

The learning processes of music and reading are complex, multifaceted, and require a wide variety of instructional practices. Both subjects function by use of sound prior to symbols, the use of symbols that have individual meaning, and require processing previously learned symbols through a coding, encoding and decoding process (Hansen & Bernstorf, 2002). In addition, music and reading both require listening, rhythm, communication, creating, thinking, expression and memorization, vocabulary and small and large motor development (McIntire, 2007), auditory, audiovisual characteristics and audiovisual perceptions. The following literature review will expound upon these correlations.

**Sound.** One area in which activities used in music and reading proves invaluable to both is auditory perception (Harris, 1947). Various research studies have linked reading impairment to tonal or auditory glitches (Atterbury, 1985; Doehring & Rabinovitch, 1969). Other studies found correlations between reading ability and pitch discrimination (Fisher & McDonald, 2001; Hansen & Bernstorf, 2002; Lamb & Gregory, 1993).

Weinburger (1998) details how music supports the development of reading skills. He states “to understand how music education can benefit reading, we must consider the three stages of learning to read: visually recognizing words; learning the correspondences between visual parts of words (graphemes) and their spoken sounds (phonemes); achieving visual recognition of words without going through the earlier stages. The
critical second, or phonemic, stage is most important. Music facilitates reading by improving this second, sounding-out stage” (pp. 36-40).

The concept of sound is an intriguing phenomenon defined differently according to one’s perspective. Some researchers define sound through a physiological viewpoint in which sound is a continuous “vibrating aural source and a vibrating medium” (Branigan, 1989, p. 312). Psychologists believe sound to be a sensation caused by sonorous vibrations (Mayer, 1879). Audsley (1890) adds to this theory articulating that sound is “a sensation that is the impression made through the ear and brain upon the mind” (p. 106). Sound has been labeled by sociologists as a perception (Wagner, 1977). Philosophers define it as a force of nature (Audsley, 1890) in addition to a characteristic of an object (Pasnau, 1999). Several studies have sought to understand sound, (Crum & Bregman, 2006; Seither-Preisler et al., 2007) yet there continues to exist a variety of interpretations and assumptions on the definition of sound.

In answering this question, theorists seek to analyze beyond the physical aspects of sound. This process becomes subjective because the concept of sound becomes a platform for a variety of theoretical viewpoints and ideologies from several disciplines. For the purpose of this research, the focus will center on the physiological and psychological perceptions of sound as they are the two aspects commonly used in the academic setting. In addition, a brief discussion on the philosophical perception will be introduced that supports both the physiological and psychological aspects.

**Physiological.** Historically, sound has been explained by its physical characteristics as a “wave that travels though a medium” (Pasnau, 1999, p. 318). It is temporal and only exists within the physical limitations of the laws of science and
therefore, sound is ubiquitous and occurs each time conditions are aligned. These conditions involve three aspects: an energy-producing source, a medium for the source to travel through and a receiver that will interpret the energy from the source (Moseley & Fies, 2007). Sound waves transport energy to a signal that can interpret the vibration. Upon leaving its origin, sound diverges into two separate entities, direct sound and reflective sound (Yu, 2003). Direct sound is the initial sound that “reaches the listener.” Reflective sounds are those that ricochet from various surfaces back to the listener. Sound reflections can reach multiple listeners at different times. One person can interpret a reflection completely differently from another person hearing the same reflection. Thus, Yu (2003) suggests that like a fingerprint, no two sounds are exactly alike. In addition, two people listening to the same sounds will hear the sound differently and therefore, when a sound leaves its source, it can never be duplicated. These facts beg the question of the origin of the source since “we cannot fully perceive sound if we focus on only one aspect of it” (p. 94). The psychological viewpoint is based on sound as a perception.

**Psychological.** Psychologists define sound as a perceived aural psychological experience (Wagner, 1977), a sensation with “invariant” properties such as pitch, volume, time and timbre (Coward & Stevens 2004; Seither-Preisler et al., 2007). Pasnau (1999) delineates sound into two components: an “auditory sensation in the ear or a disturbance in a medium, which can cause this sensation” (p. 318). The sensation, appropriately called “hearing,” in turn functions as the descriptive property of the object making the sound. Since psychology is the study of how one comprehends, sound then becomes subject to whoever decodes the sensation.
Sound is also classified as the object of hearing in which the ear, the most acute hearing device, deciphers the psychological properties of sound to determine the origin (Yu, 2003). Since sound relies solely on sensation, if one cannot feel such sensation, sound does not exist. Hence the riddles, “if a tree falls in the forest and no one is there to hear it does it make a sound”? Under the psychological theoretical framework, if no life form with aural detection devices feels the sensation the sound of the tree is absent. On the contrary, one might ask if a person with hearing loss can feel the vibrations of a sound, but does not experience the sensation of the sound, sound does not exist. In this case sound is feeling the vibrations of the source transmitting the sound, not hearing it. Sound is a sensation in some form whether this is the feeling of the vibration or hearing it.

Philosophical. Prominent historical philosophers like Aristotle, Boethius and the like suggested that sound is a “certain motion of air, a percussion of air that remains intact up to the point of hearing, and that sound is only potentially made actual by the medium” (Pasnau, 1999, p. 310). Today, the philosophical theory conceptualizes sound in two ways. The first idea is a force of nature, the other a descriptive property. “Sound is transitory and fleeting, as produced rather than possessed, and when tied to a material object makes the object appear permanent” (Branigan, 1989, p. 319).

Sound as a force of nature is equivalent to the forces responsible for the sensory modalities: light, heat, odor and flavor. As a force of nature, it operates with its own implications of law spreading from its source until it reaches the auditory nerve and is then transformed into a sensation of hearing (Audsley, 1890). With this in mind, sound is absent until the sensation is both experienced and labeled by the brain. In deeper
thought, sound is actually an “invisible agent” that travels forward progressively spreading itself (Audsley, 1890). This explains the phenomena in which sound permeates a space, like the common notion that “music fills the air.” This “agent” appears during the short amount of time in which the perceived sound travels to its analyst (the ear) that then determines the “agent” as a sound and assigns it a label.

In addition, if sound is caused by a wave the term “sound” is invalid. What we hear is actually the wave of a bell or the wave of a voice. Not until the wave makes an impression on the brain does the wave become a sound. Then the sound of the object becomes the object’s descriptive character. Audsley (1890) explains:

The mental impression is not sound at all, but the final effect of sound upon the brain and mind. If sound is fundamentally the impression made through the ear and brought up to the mind, then that which produces such impression by beating against the tympanic membrane and bending it “in and out,” and which travels several miles from the sounding body through the air in the shape of “condensations and rarefractions” as the wave theory teaches, is not sound at all. (p. 107)

Research has produced various categories of sound. Categories include environmental and informative sounds (Coward & Stevens, 2004), musical sounds (Feld & Fox, 1994), speech sounds (Kazanina, Phillips, & Idsardi, 2006) and ambient sounds (Fontana, 1987). The perceptions and interpretations of these sounds are determined by physiological and psychological processes. The academic classroom employs all of these sounds. Albeit when teachers are teaching concepts aurally they are teaching within the limits of sound and its perception. Academic success hinges on the promise that sound is perceived, analyzed and communicated accurately. This next section of the literature review will focus on the music and speech sounds in order to illuminate how sound is a fundamental component of both music and reading.
Sound Perception.

Language. Successful reading strongly depends on the stage in which language acquisition proceeds to the phoneme to grapheme connection, the auditory interpretation of the written image (Lamb & Gregory, 1993). A level of language decoding hinges upon the ability to connect the alphabetic symbols with their sounds (Register et al., 2007). Thus, causation of the breakdown in academic achievement may be attributed to a disconnect between a student’s physiological and psychological process of aural perception, how a person hears, receives and perceives information. “Many of the difficulties that arise in the process of reading are similar to those involved in music. The cause of some reading problems may be due to a deficiency that affects not only the child’s reading, but his other work as well” (Harris, 1947, p. 29). A study by Bradley and Bryant (1985) found students with a deficiency in reading lacked the ability to distinguish rhyme and alliterations more than those of younger age on the same reading level. “A speaker’s perception of a sound contrast is affected by the status of that contrast at the level of word meanings. However, behavioral responses may reflect late, conscious processes and can be affected by other systems such as orthography, and thus they may mask speakers’ ability to categorize sounds based on lower-level acoustic distributions” (Kazanina et al., 2006). For example, when a teacher teaches a concept aurally and demonstrates the sound of the letter “b,” a student’s physiological hearing of the letter is correct, but the psychological interpretation may be inaccurate. A study conducted at Stanford University (2004) investigated the effects of music on the way the brain processes the spoken word. Subjects (n = 40) were divided into two groups of musicians and nonmusicians. Within these categories, subjects were grouped by age, sex, general
language ability and intelligence. To meet the criteria of a “musician,” an individual must have played an instrument prior to age seven and have continuous practicing time for several hours a week without interruption. Results indicated that the musicians surpassed the nonmusicians in the ability to distinguish among different tones, with fMRI scans showing that the musicians had more efficient brain activity and focus. In addition, musicians were able to identify similar syllables like “dah” and “bah” faster than the nonmusicians. “A person has only a 40,000th of a second to differentiate between the two sounds when the physical signal hits the ear. The musicians made those rapid auditory distinctions more accurately and quickly than the non-musicians did.” (Sturrock, 2005, p. 1). Researcher John Gabrieli insists that children who have difficulty with rapid auditory processing are at high risk of becoming deficient in reading. “That becomes a reading problem, because when the teacher explains that this letter is a "p" and this one a "b," a student with poor processing ability might not hear the difference” (Sturrock, 2005). The child is not getting the aural perception that can ultimately affect academic achievement.

Burger and Winner (2000) sought to find the parallels between the arts and reading through a meta-analysis of several studies. The authors explain the possibility of a connection by stating “if children with poor reading skills are deficient in reading because of a weakness in visual perception, and if visual arts instruction enhances the same kind of visual perception skills needed for efficient reading, then such a suggestion is plausible” (p. 277). Likewise, if a child’s reading skills are deficient in aural perception, then music instruction can enhance the aural skills needed for reading. A study (Musacchia, Mikko, Skoe, & Kraus, 2007) investigating musicians’ auditory and
audiovisual processing of speech and music found that musicians exceeded nonmusicians in response to speech and music stimuli introduced in auditory and audiovisual conditions. “The earlier latencies and larger magnitude of onset responses exhibited by musicians suggest that this group has a more synchronous neural response to the onset of sound, which is the hallmark of a high-functioning peripheral auditory system” (Musacchia et al., 2007, 15894). Conclusions present practical implications of the value of music training schools and their benefit to students with “speech-encoding deficits” (Musacchia et al., 2007, p. 15897).

Music. There are several aspects of music perception. Crum and Bregman (2006) explain the aspects of perceptual organization as a way of analyzing “incoming sensory information.” Two forms are discussed in the research literature. The first, the “integration of simultaneous components” is the breaking down of a combination of sounds into individual parts or units. The other “sequential interaction” involves the connection, through analysis, of a series of tones over a period of time (p. 543).

Darrow and Novak (2007) state that for persons with no hearing, perception heavily relies on how the mind organizes the perceived material provided by musical sounds with the little to no sensory information. Although deaf persons have no physiological perception of sound (hearing), they do experience the psychological perception creating judgments from the sensations they feel (hear). “Another avenue of pleasure to the deaf from music, is the pleasurable effect of vibrations gently exciting the nerves” (Darrow, 2006, p. 27).

The ability to make discriminations about what one hears is a function of listening. Listening is a mental process; hearing is a physical process. It is the function of the ear to collect auditory stimuli and deliver them to the brain -- at which time the brain takes over and hearing becomes listening (Darrow 1990b).
The development of good listening skills allows students with hearing losses to use their residual hearing to the maximum extent possible. The music classroom is an excellent place to develop and to exercise good listening skills. (Darrow, 2007, p. 57).

Darrow’s (2007) research of music and persons with hearing loss developed suggestions, some pertaining directly to sound perception, that can apply to those who may have difficulty with sound perception, including: (1) music skills of deaf and hard-of-hearing students may be delayed rather than deviant, (2) pitch discriminations can be made more easily in lower frequency ranges, pitch discrimination skills can be developed with training, (3) discrimination skills may be misjudged because of language problems that interfere with students' ability to describe what is heard, (4) to meet educational objectives, students with hearing losses may require greater exposure, both in duration and intensity, to music stimuli than do typical hearing students, and (5) students with hearing losses can develop an ear more sensitive to sound over time.

As mentioned in the introduction of sound, a sound is received differently to whomever hears it (Yu, 2003). If there is no perception, the sound does not exist. In addition, students who are deaf hear a distorted sound that is then performed as distorted. When applied to students who have difficulty interpreting the physiological process of hearing, what is interpreted is then performed. In essence, this disconnection between the physiological and psychological process of hearing can affect all academic subjects. Barwick, Valentine, West, and Wilding’s (1989) investigation with groups of children with a wide range of reading abilities, including a high proportion of poor readers, found that subjects who had poor music perception also had poor reading ability.

**Auditory and audiovisual perceptions.** Musacchia et al. (2007) suggest another commonality between reading and music occurs during audiovisual perceptions.
Incongruent auditory sounds in both music and reading coupled with observing lip movement or instrumental playing can affect or manipulate what people hear. These perceptions are employed during performances in which communication occurs between performer and listener. Musacchia et al. (2007) describe these characteristics in detail saying

speech and music communication are infused with cues from both auditory and visual modalities. Lip and facial movements provide timing or segmentation cues (i.e., of consonant and vowels), as well as more complex information, such as emotional state, that improve the listener’s reaction time and recognition of speech. Similarly, a musician’s face and body movements convey cues for time-varying features of music, such as rhythm and phrasing (i.e., the grouping of notes into a division of a composition), the emotional content of the piece, and changes to and from consonant and dissonant musical passages. (p. 15894).

Auditory perception is essential for success in reading, therefore, participation in singing fine tunes requires the auditory skills needed for reading success (Uhl, 1969).

“Through singing, children have wonderful opportunities to manipulate sound. Specific phonemes can be manipulated, vowels can be held for shorter or longer durations, and consonants can be articulated in various ways. One of the most important skills we teach in singing is how to adjust consonants and vowels to make music more musical” (Hansen, Bernstorf, & Stuber, 2004, p. 57). Audiation, a term coined by Edwin Gordon, refers to the psychological process of hearing and interpreting music and/or musical sounds, even when no physical sound is present. “Audiation is to music what thought is to language” (Gordon, 1997). It is a skill that can be developed through consistent exposure to and instruction in music. Gordon (1997) clearly identifies the concept of audiation by stating:

When you listen to music, you aurally perceive sound. It is not until a brief moment after you hear the sound that you audiate and give meaning to that sound as music. You are, of course, also aurally perceiving and then giving meaning to
the additional sounds that you are following in the music. That is, you are doing more than one thing at the same time when you are audiating music. You are attending to and also comprehending the music and, depending on your knowledge and experience, perhaps you are doing more. Sound itself is not music. Sound becomes music only through audiation, when, as with language, you translate the sounds in your mind to give them context. The meaning you give to these sounds will be different on different occasions, as well as different from that given to them by another person. (p. 44)

The ability to hear sounds, while reading, is a skill used when students match a pitch in music (Harris, 1947). Gromko (2004) examined the relationship “among music-reading and tonal and rhythmic audiation, visual field articulation, spatial orientation and visualization and achievement in math and reading comprehension” (p. 6). The study included four Midwestern public high schools (n = 98). Several tests were given at the end of the year and during the fall semester between marching band season and concert season. Tests included the Advanced Measure of Music Audiation for scores of tonal and rhythmic audiation and Iowa Tests of Educational Development for reading scores. The results indicated that in regards to reading comprehension, audiation, spatial-temporal reasoning, and visual perception of patterns, music promotes the use of various cognitive thinking skills.

“When considering the effect of reinforcement on learning, it is easy to understand why a child’s experience with music supports reading. [...] the acquisition of language and reading skills and the acquisition of music learning skills require virtually the same auditory and visual processes” (Hansen et al., 2004, p. 43).

**Language Systems.** After analyzing more than 100,000 studies in children’s literacy development and implications for reading instruction, The National Reading Panel and National Research Council identified five key areas of literacy to be phonemic awareness, phonics, fluency, vocabulary, and comprehension (Armbruster, 2003).
**Phonemic Awareness.** The sound systems of both reading and music establishes the initial foundation to learning each subject. Although the terms of the systems vary, they both perform similar roles in the process of achieving proficiency. “Phonological awareness is defined as general knowledge of the speech sound system and includes word boundaries, stress patterns, syllables, onset-rime units, and phonemes” (Reading & Van Deuren, 2007). This large concept of sound manipulation encompasses the first level of literacy learning, phonemic awareness (see Figure 1). Phonemic awareness refers to the specific auditory skill that allows identification of individual sounds in words (Torgesen, 2002). It is the understanding that words contain individual sounds that are smaller than a syllable. There exist six subcategories of phonemic awareness that provide rigorous experiences and instruction in phoneme manipulation, which includes phoneme isolation, phoneme identification, phoneme categorization, phoneme blending, phoneme segmentation and phoneme deletion (Ehri & Nunes, 2002). Adams (1990) states that “[phonemic awareness] may be the most important core and causal factor separating normal and disabled readers” (pp. 304-305). Mastering phonemic awareness provides students with the ability to discriminate phonemic sounds needed to formulate words, sets the stage for meaningful phonics instruction and is a critical component for a child learning to read (Armbruster & Osborn, 2003).

Butzlaff (2000) suggests that experience in listening to music trains a general kind of auditory sensitivity that is also used to make phonological distinctions” (p. 167). The ability to discriminate phonological sounds in reading is comparable to the ability to discriminate tones in music (Butzlaff, 2000). Many children first encounter reading and music prior to formal instruction when they experience stories being read or moving
and/listening to lullabies. Learning is reinforced through songs and rhythms that most children learn prior to reciting the alphabet (Diamantes et al., 2002). The smallest unit of language (phoneme) is analogous to the smallest unit of music, which is a pitch or rhythmic note (O’Herron & Siebenaler, 2007). Curtis (2007) observed specific usage of phonemic awareness within a music setting when the music teacher used songs that infused alliteration or word play and requested students to concentrate on sounds that were high, low, loud, soft, same or different.

![Figure 1. Visual representation of music’s equivalency to phonemic awareness.](image)

According to Hansen et al. (2004), “musical activities are a natural way to foster phonological awareness. Using songs, chants, or movement, children can manipulate sounds in many ways. ‘The same parameters of pitch, dynamics, duration, and articulation that make sounds musical, can transcend linguistics. Music can exist with or without words’” (p. 42). Therefore, discrimination of musical sounds in the musical setting increases the ability to read through the awareness of pitch changes (Lamb & Gregory, 1993) and provides opportunities for recognition of phonemic patterns of language (Yopp & Yopp, 2000). Researchers have found that music introduced at an early age enhances performance in phonemic awareness. Lamb and Gregory (1993)
investigated the relationship of both phonemic and musical sound discrimination to reading ability in children during their first year of school. Results indicated that both music and phonemic share a relationship specifically in regards to the awareness of pitch changes. Gromko (2005) investigated whether music instruction increased the development of phonemic awareness, in particular phoneme segmentation, of young children (n = 103). Results found that the kindergarteners who received music instruction demonstrated “significantly greater gains in their development of phoneme segmentation” a sub-category of phonemic awareness, t = -3.52, df = 101, p = 001.

Findings support that the act of singing “is a form of naturally segmenting and blending phonemes on the breath” (O’Herron & Siebenaler, 2007, p. 17). Other supportive studies on the correlation include those of Wandell, Dougherty, Ben-Shachar, Deutsch, and Tsang (2008) and Saffran, Johnson, Aslin, and Newport (1999).

Lucas and Gromko (2007) investigated the relationship between phoneme segmentation to pattern perception in music among first grade students (N = 27). To measure the phonemic awareness skill, two subtests from DIBELS were used; phoneme segmentation (PSF) to measure aural skills and the nonsense word fluency (NWF) subtest to measure letter recognition and sound production. To measure musical pattern discrimination, the Primary Measures of Music Audiation, which measures rhythm and tonal discrimination, were used. Results indicated that the tonal and rhythm scores correlated with the phoneme segmentation fluency scores. Specifically, the relationship between musical pattern discrimination and phonemic awareness was measured using the Pearson product-moment correlation with the statistical results of r = 0.49, with p = 0.01.

Gromko, Hansen, Tortora, Hiffins, and Boccia (2009) examined whether children’s recall
of tones, numbers, and words were supported by a common temporal mechanism (N = 74). Results indicated that indeed a common temporal sequencing may support children’s recall of tones and nonsense words. Additionally, they also found that although children’s recall of tones, numbers and words differed by symbol system, all related to the use of aural discrimination skills. Findings of this study suggest the possibility that phonemic awareness helps students hear pitch and pitch matching assists students with phonemic awareness.

There is even evidence of music and sound reliability when learning poetry.

“Poets manipulate the elements of sound, rhythm, and meaning to create an impact more powerful than any found in prose. Of all the elements in poetry, sound offers the most pleasure to children. Rhyme, alliteration, assonance, and onomatopoeia are among the language resources for sound” (Galda & Cullinan, 2006, p. 99) used to convey meaning.

**Phonics.** Phonics instruction employs the connection between the aural representations of a sound (phonemes) with the written representation (graphemes), essentially a two-step process. It involves corresponding sound to a visual element (Reading, 2006). According to Tankersly (2003) the second step, decoding is the ability to use visual, syntactic, or semantic cues to make meaning from words and sentences (p. 284). The National Literacy Strategy (NLS) framework (2001) identifies the task students should be able to perform that demonstrates proficiency in phonics instruction:

[...] hear and say initial and final sounds in words, and short vowel sounds within words, link sounds to letters, naming and sounding the letters of the alphabet, and using their phonic language to write simple regular words and make phonetically plausible attempts at more complex words. (p. 3)

Phonics advocates argue that if a person is able to correctly decode text, meaning and understanding will follow (Wren, 2001). Consequently, phonics instruction is a step that
cannot be passed with a slight weakness. It must be a strong component in a student’s ability to read. Harris (1947) mentions that decoding in music involves visual discrimination of the many similarities and differences among notes and where they are located on the staff, a similar skill to letter decoding as shown in Figure 2.

The ability to reason, which is so essential to independent word analysis and phonics, can also be brought out through music. In reading music and working with syllables and other technical terms, a great deal of reasoning is involved. It enters into the finding of “do” and the key in which a particular song or piece is written. (p. 30)

<table>
<thead>
<tr>
<th>Reading Example: (sound with print)</th>
<th>dog= /d/ /o/ /g/</th>
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</thead>
<tbody>
<tr>
<td>Music Example: (sound with print)</td>
<td>Individual Notes OR Chord</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Individual Notes" /> OR <img src="image" alt="Chord" /></td>
</tr>
</tbody>
</table>

Figure 2. Visual representation of music’s equivalency to phonics instruction

In both music and reading, symbols are required to receive and clarify information and to communicate effectively with others (Slater, 2005). In reading, symbols are letters; in music, symbols are individual notes. In order for a reader to effective use symbols on a higher-level, one must know and understand the meaning and function of each symbol individually before understanding its use in context with other symbols. In essence, symbols: (1) are the most important component of the communication process; (2) are used to express a complete thought; (3) individually have meaning and; (4) can be used in isolation or collectively.
Mastering the visual identification of music notes will then lead to meaning. “Music teachers develop many activities to help students understand the important decoding skills needed for reading music. As they demonstrate music decoding skills, they frequently demonstrate language reading skills—words or syllables—at the same time (Hansen et al., 2004, p. 54).

Phonics is similar to the process of singing or playing an instrument. “Students at the decoding stage learn to combine the reading of simple high-utility music symbols with high-utility words. Examples include using syllabic sounds such as “tah” or “ti” with rhythms involving quarter notes and eighth notes (rhythm reading) and using musical alphabets, solfege, or scale numbers (melodic reading)” (Hansen & Bernstorf, 2002, p. 19).

Fluency. Fluency in reading is the ability to read a text quickly and accurately. Armbruster (2003) contends that it is the component that provides a bridge between word recognition and comprehension. Elements of fluency involve speed or automaticity, accuracy of words read and expression. Hahn (1987) states “the process of reading written language consists of a sampling of text or clues that ‘make sense’ in light of the reader’s experience, then ‘constructing’ meaning from these clues. Guided by internalized ‘rules’ of the language, the reader then predicts probable continuations while continuing to sample the text. If predictions are confirmed, the cycle continues. If they are not, the reader re-reads for additional clues—a process called ‘correcting’ in Goodman’s model of reading language” (p. 41). In music, fluency also involves rate of reading, accuracy and expression; however in addition to reading text, students are also required to read music notation. Hansen et al. (2004) compared fluency of text reading to
indicators of a fluent musical performance. A fluent musician would execute a performance “smoothly, easily and readily” (pp. 8-9).

A fluent musical performance similarly demonstrates an automatic and skillful execution of the musical symbols and text within each of the decoding skills. Emergent fluency may find a student who can correctly look at and then tap a simple rhythm. At the decoding stage, simple melodic patterns are sung flawlessly using solfège or the musical text. Students who demonstrate the highest levels of fluency are able to perform a composition with virtually no errors. (Hansen & Bernstorf, 2002, p. 17)

Sloboda, Parncutt, and Clarke (1998) conclude that “fluent music readers do not read every note but rather sample the score and predict continuations that are ‘likely’ or appropriate within a certain musical idiom” (p. 42) as seen in Figure 3. Therefore, music and reading involves a perception and interpretation of patterns and relationships (Hahn, 1987). Studies by Goolsby (1994) and Lehmann and McArthur (2002) support this as they found that skilled music readers focus on structure or patterns rather than individual notes.

Figure 3. Visual representation of music’s equivalency to fluency

*Put Reading First* states that readers must know to pause appropriately within and at the ends of sentences and when to change emphasis and tone (Ambruster & Osborn,
By definition, rhythm is patterns of sounds and silences organized in time. O’Herron and Siebenaler (2007) contend that rhythm perceptions are also related to language skills. Children who have deficiencies in rhythm perception will most likely have difficulties with fluent reading. McGivern, Berkia, Languis, and Chapman’s (1991) examination of the effects of temporal pattern discrimination among kindergarteners, found that those with learning disabilities scored lower than average on the Seashore Rhythm Test for Rhythmic discrimination.

Music performance involves attention to vocal inflection as a source of expression. Emphasis on the upward and downward sounds of both vowel and consonant sounds are reviewed and rehearsed in order to accentuate lyrics attributing to expression (Avery, 1999). Gerard and Auxiette (1992) discuss the parallels between prosody in singing and prosody in speaking as “the temporal evolution of the spoken string that constitutes prosody as usually studied by considering three variables: the rising and falling of the voice pitch and intensity and the rhythm” (p. 94). O’Herron and Siebenaler (2007) support this when stating “a child’s prosodic expression in speaking and in reading reflects his or her perception of pitch (intonation), rhythm (accents), and dynamics (inflection).

In a case study that examined literacy experiences within a music classroom, events observed included activities that focused on “increased rate, prosody, and automatic word identification” (Curtis, 2007, p. 162). These activities included rhythm reading, reading of stories/songs, choral reading/singing of text, re-reading of texts for multiple purposes and repetition of songs during rehearsals.
**Vocabulary.** Vocabulary refers to the words needed to communicate effectively (Ambruster, 2003). Children experience vocabulary in two forms, oral and reading. Oral vocabularies are the terms used in speaking or recognized during listening. Reading vocabulary are the words recognized or used in print. In music, vocabularies are the terms needed to execute a performance as shown in Figure 4.

Literacy Ex: High frequency words/symbols (the, that, is, you, etc).

Music Ex: High frequency music words/symbols (*poco rit, a tempo*).

*Figure 4.* Visual representation of music’s equivalency to vocabulary.

Scores of vocabulary words are embedded within compositions and music content (Curtis, 2007). Students must be knowledgeable of the definition of such terms within compositions so that the performance is accurate and true to the composer’s intentions. Additionally, content terms such as “beat,” “rhythm,” “rap,” “theme and variations,” etc. have specific definitions that are distinctive to music instruction. Vocabulary instruction is also used when examining “thematic topics related to song” (Curtis, 2007, p.126). In addition to musical vocabulary, descriptive words taken from speaking vocabularies are used when analyzing music (Curtis, 2007). These words describe tone color, mood, and the aesthetic experience and can demonstrate students’ ability to make an abstract
concept concrete—evidence of higher order thinking. Use of punctuation is also evident in music and serves the same function as in reading. “Punctuation that gives clarity and sense to language gives breath to a musical piece. A verse of poetry is comparable to a musical phrase. In music, to phrase literally means to breathe. The use of musical punctuation is similar to the function of grammar in writing [literacy]. Its function is paramount to the piece but not obvious to the listener” (Avery, 1999, p. 187).

“Because reading is an active process that includes the reader, the text, and the situation, creative expression activities enhance comprehension and vocabulary skills” (Hill-Clarke & Robinson, 2004, p. 93). Obarow (2004) investigated the effect of music on the acquisition and retention of story vocabulary for kindergarten and first grade students. Although there were no statistically significant results found regarding the effect of music on vocabulary acquisition it was however noted that the students were motivated and engaged in learning.

**Comprehension.** Comprehension is the ability to understand, remember and communicate with others about what is read. Armbruster (2003) defines comprehension strategies as conscious plans—sets of steps that good readers use to make sense of text. These steps have a firm scientific basis that improves text comprehension. The steps include: (1) monitoring comprehension; where the teacher is aware of what the students do understand, identify what they don’t understand and use appropriate strategies to resolve any problems; (2) using graphic and semantic organizers; (3) summarizing; (4) answering question; (5) generating questions; (6) recognizing story structure and an added seventh through class discussion and; (7) making connections through text to self, text to text, and text to world. Research in the area of music and comprehension is
limited and examined as deriving meaning from the lyrics in a composition. Curtis (2007) observed the use of comprehension during a music classroom session when the teacher asked students to demonstrate understanding of the lyrics of a song through movement.

Cowell (1994) found that when kindergarteners read a “big book” whose text was set to music they were more accurate in their recall than when the book was rehearsed with text only. Porter-Reamer (2006) reported similar findings of no significant difference in narrative comprehension in pre-school children of a storybook presented with text versus with song. However, the song picture book demonstrated experience in attention to print, verbatim recall, and focus on meaning.

Hansen et al. (2004) suggest that reading comprehension can be taught through music activities. “Using music that includes lyrics, teachers can design instruction that requires students to find the main idea, sequence, summarize and predict while enhancing instruction with higher level questions to challenge the student’s understanding of texts” (Curtis, 2007, p. 63). However, Hansen and Bernstorff (2002) cautioned that understanding of the lyrics in a composition is not necessary for performance and therefore should not be a measurement of comprehension.

The line is drawn between decoding and comprehension as meaning is extracted from the text or music. While fluency is generally acknowledged as a critical component of skilled reading or musical performance, it in itself does not guarantee that the student understands the text or music through higher-order thinking levels such as comparing and contrasting, synthesizing, evaluating, or creating. Perhaps the need to find meaning in music beyond flawless performance augments the reason to aim for the National Standards for Music Education. (p. 17)
Eisner (2001) proposed that for students to make meaning of music involves both the decoding and encoding process. He asserts music scores are filled with ambiguity in which the reader must use constructive devices, both encoding and decoding, to make meaning of the music (see Figure 5). “Any conductor knows that any score can be played in an infinite number of ways, and how it is played depends on how the first listener, the conductor chooses to interpret that score (p. 21).

![Prelude](image)

**Figure 5.** Example of music’s equivalency to comprehension

Gromko (2004) found that along with aural discrimination of rhythmic patterns, sight-reading of music was, among other factors, predicted by reading comprehension of text. She asserts that such a correlation is plausible because music notation and text are both read from left to right and “and speed accuracy of the visual scan is necessary for comprehension of the information” (Hayward & Gromko, 2009, p. 27).
Music and reading share a performance aspect. The purpose of both reading and music is performing both flawlessly to give the best impression to its listeners (Hansen & Bernstorf, 2002). Performance is how this communication takes place. Audiation is what is communicated in music, whereas thought is what is communicated in speech (Gordon, 1999). The process of learning pitch and rhythm involves concentration on individual syllables through identification and fluency in response to these syllables in order to formulate phrases. Likewise in reading, careful attention and much practice occur in identifying letters and phonemic sounds needed to formulate words. The academic destination of both music and reading is to become literate (Gransee, 2003).

**Relevant Music and Reading Research**

Researchers have linked music learning to academic performance (Huang, 2004; Lowe, 1995), spatial ability (Karma, 1979; Nelson & Barressi, 1989) and cognitive development (Costa-Giomi 1999, 1995; Lynn et al., 1989). Music is also suggested to enhance creative and critical thinking, cognitive and affective skills, perception, interpretation, subjective expression, understanding, fluency in speech, discrimination and visual literacy (Rausher et al., 1997). Consequently, the “[National Association for Music Education] NAMC cites the No Child Left Behind Act of 2002, Title IX, part A, sec. 9101(11) as including the arts as a vital component of a school education” (Petress, 2005, p. 3). These studies provide evidence that there is an association but not causation (Crncec, Wilson, & Prior, 2006) as causal claims can only be justified through experimental research. This begins the debate among the music community on the connection between music and reading.
The debate over whether or not music enhances reading dates back to the 1940s. Harris (1947) believed that one can detect a child’s reading deficiency through music participation. “Music teachers have often [been] puzzled over the fact that so many children who are slow readers, but who love music, can learn to read music (Zinar, 1976, p. 70). Both music and reading include an array of facets in which pinpointing an exact causation has yet to be determined. Although no significant research has been done to prove a direct causation to support the improvement of reading through music, many educators and researchers have made assumptions that music goes beyond just increasing academics but can improve specific subjects.

A study by Nicholson (1972) investigating whether or not music had the ability to improve reading skills in slow learners found “the experimental group performed better in the recognition of letters because they were taught to discriminate and match pitch by singing, which facilitated retention of the material” (p. 13). It was also found that the singing of musical compositions allowed experiences in saying the sounds of letters because of the emphasis used in singing texts. Hutton (1953) found little correlation between initial language reading scores and music ability. Lester and Wheeler (1952) and Cooley (1961) found there to be a low positive correlation between language and music reading abilities. Maze (1967) found a high correlation between language reading tests and the musicality test at the first grade level. Kelley (1981) investigated the effect of music instruction on reading skills among first grade students. Results determined that music demonstrated potential in enhancing reading and language development in first grade students.
Lu (1986) compared the reading performance of first grade students who were taught reading in the context of Kodaly-Orff based music classes with students who received only reading instruction through the traditional approach. Pre and post tests concluded that both groups performed significantly higher in the post tests. Whether or not involvement in music classes influenced the outcome of the post test was not scientifically determined, which leads to opposing views on the effectiveness of music instruction on literacy enhancement.

Groff (1977) argues that research performed has not shown high enough correlations between skills involved in learning music and skills involved in learning to read, to justify such a prediction and states “other facts suggest that reading music and language are not as closely related as some claim” (p. 39). Groff (1977) refutes earlier research by presenting the following contradictory research that liberal arts college students were found to be significantly better language readers than music students (as cited in Wheeler & Wheeler, 1951). Groff (1977) insists although some research has proven positive correlations, arguments exist over the research design (Movsesian, 1967; Nicholson, 1972). Groff (1977) indicates weaknesses in the studies due to the research question being asked in addition to: (1) the low number of pupils used, (2) no preset criteria for the teachers implementing the study; (3) teachers were given consultation by researchers themselves before the study, and (4) the researcher gave no explanation of how “teaching children music reading skills, which were sound-oriented, could have helped the children read the basal readers they used” (p. 40).

Almost without exception, the claims to this effect [music and literacy] are either anecdotal reports or expressions of opinion, wishful thinking, or hearsay. The pieces of research that bear directly on the issue have been shown to have shortcomings. The designs of these studies have flaws of such a nature that one
can raise serious questions as to the accuracy of their findings. (Groff, 1977, p. 41)

More recent scholars added to the discourse by seeking to find correlations between music skills and oral communication (Braithwaite & Sigafoos, 1998); phonological awareness and reading ability (Anvari et al., 2002; Bowles, 2003; Kemmerer, 2003; Lamb & Gregory, 1993). A recent study (Register et al., 2007) on the efficacy of music as a remedial strategy examined its effects on the reading skills of second grade students and students identified with a reading deficiency, particularly English Language Learners (ELL). Results indicated greater gains in the area of word decoding, reading comprehension and test total and significant gains in word knowledge (p = .01) compared to those students who did not participate in the music intervention. Even with these recent findings, questions remain over whether studies of the music and reading correlation demonstrate empirical evidence that warrant such a prediction and that the relationship must be clearly interpreted (Burton et al., 2000; Butzlaff, 2000; Crnec et al., 2006; Register et al., 2007).

Nonetheless, programs have been developed to encourage reading and arts integration in hopes to increase achievement. One of the first recognized arts-integrative programs was Learning to Read Through the Arts initiated in 1971 by the New York City Board of Education and the Guggenheim Museum (Kindler, 1987).

Evaluation of The Learning to Read through the Arts (LTRTA) elementary (K-6) integrated arts program revealed that “students in this program usually improved in reading at a rate higher than that of the national average” (Burger & Winner, 2000, p. 278). Success of the program attributed to the collaboration between classroom teachers and music teachers to create a curriculum in which the arts were the main motivation for
the learning process. Teachers involved in the program were given extensive training in how to develop an arts integrated program. Collett (1991) interpreted these same results by stating “these integrated music experiences provide excitement in learning for children and thereby improve students’ reading, writing, thinking and analyzing skills and strategies” (p. 45). Additional programs developed in the early 1970s, like LTRTA, believed the arts had a strong hand in improving reading skills including the Children’s Art Carnival (CAC) developed in 1974 and Reading Improvement Through the Arts (RITA) established in 1975. Today arts integrated schools and programs continue to develop across the nation.

One prominent nationally recognized model is the Kennedy Center’s Changing Education Through the Arts Program (CETA). CETA’s goal is to find natural connection(s) between one or more arts forms (dance, drama/theater, music, visual arts, storytelling, puppetry, and/or creative writing) and one or more other curricular areas (science, social studies, language arts, mathematics, and others) in order to teach and assess objectives in both areas, allowing a simultaneous focus on creating, performing, and/or responding to the arts while simultaneously addressing content in other subject areas.

Integration has been a source of educational inquiry. For years, researchers, educators and administrators have strived to provide “diverse opportunities for posing and solving difficult tasks and learning skills to examine information in context rich detail” (Krug & Cohen-Evron, 2000, p. 25). National Music Standard 8 suggests that music educators “integrate music with other subject matters,” however, the recent thrust toward integrated and interdisciplinary instruction, specifically in regards to reading, may
challenge music educators’ personal philosophy in regards to “teaching music for the sake of music” or “teaching music to teach other subject areas” (Hill-Clarke & Robinson, 2004). It is beyond the scope of this study to address all components of integration, however, the following will provide an overview of integration, including the history, theoretical underpinnings, approaches and manifestations in both K-12 and higher education arenas and a rationale for the approach guiding the study.

Integration

Because numerous models, theories and processes exist, the concept of integration can be complex and elusive. Furthermore, the variety of approaches is large in number and can range from a small course of study units in one classroom to a collaborative effect within a school manifesting into a fully integrated day (Walton, 1971). By definition, integration (from the verb integrate) is the act of making something complete or whole, a bringing together (Oxford English Dictionary, 2010). Similarly, Walton (1971) defines integration as the means to “make up a whole from the parts, to combine separate elements” (p. 20). Using such definitions as a lens, integration in education is connecting one or more subjects together for deeper conceptual learning and refers to understanding knowledge beyond a discipline.

Issues of definition. Defining integration is an ongoing process and vague in the fact that there is no consensus (Czerniak, Weber, Sandmann, & Ahern, 1999; Irwin & Reynolds, 1995; Vars, 1996). Beane (1995) contends that confusion of the term “curriculum integration” is the result of differing philosophies that have emerged over the years and the continued research on the topic itself. Krug and Cohen (2000) supports this by stating “[...] confusion among these terms arises over subtle distinctions [among]
particular characteristics” (p. 264) – distinctions among terms that have various meanings according to the user of the terms. “Few educators would argue about the need for an interwoven, cross-disciplinary curriculum, but to many, the nature of the integration in many interdisciplinary projects is not readily apparent. A more pervasive problem is that integration means different things to different educators” (Davison, Miller, & Metheny, 1995, p. 226).

Advocates of integration share the belief that knowledge is essentially unified, however it poses the concern that discipline-specific knowledge is then at risk of being devalued for their uniquely individual worth (Irwin & Reynolds, 1995). A group of 60 scientists, mathematicians, science and mathematics educators, teachers, curriculum developers, educational technologists and psychologists attempted to develop a common definition of integration between math and science as infusing “mathematical methods in science and scientific methods into mathematics such that it becomes indistinguishable whether it is mathematics or science” (Berlin & White, 1992, p. 131). However, it was reported that other conference participants were concerned that the definition implying a merging of the disciplines would present opportunities for people to lose the philosophical, methodological, and historical underpinnings of each subject that must be taught. Attempts to unify integration resulted in development of additional terms including thematic, integrated, connected, nested, sequenced, shared, webbed, threaded, immersed, networked, blended, unified, co-ordinated, fused, infusion, topics within disciplines, holistic approach (Bresler, 1995; Czerniak et al., 1999).

Contributing to the confusion is how the terms for integration are used interchangeably (Krug & Cohen-Evron, 2000). Most notably, some use interdisciplinary
interchangeably with curriculum integration (Krug & Cohen-Evron, 2000; Youm, 2007). However, Beane (1995) argues that curriculum integration is distinctly separate from interdisciplinary. His reasoning is that each term consists of various theoretical and epistemological viewpoints for each definition and one delving into this discussion must be skilled in ways of knowing and understanding (Beane, 1995). At the same time, there are differing opinions on the use of the term integration. Some see it as a concept while others see it as a strategy. As a result there is no agreement on the epistemological position and furthermore there is no consensus on implementation (Irwin & Reynolds, 1995).

Badley (1986) sought to determine how the term “integration” is used in educational discourse and found five reasons as a source for confusion, including; (1) it is a positive term and frequently is employed primarily for its value as a slogan, (2) different educators give “integration” at least three different psychological meanings, (3) the same word is used to denote both processes and end states, and (4) it is a polymorphous term whose meaning is not clear until what is being integrated is specified, and (5) it is a term that invites conception-building, though conceptions are rarely announced as such—they are usually educators' visions of what ought to be come cloaked as definitions of terms. Irwin and Reynolds (1995) provide two suggestions in clarifying the topic of integration for educators is to recognize that (1) there is no consensus on the meaning of integration and (2) studies on integration are characterized by metaphors of the relationship and pathways of knowledge (connectedness, process, connections, relationships).
**Historical overview.** A landmark study by Oberholtzer (1937) sought to examine the theory and practice of an integrated curriculum to determine the value and desirability of certain integrated courses over a period of 54 school weeks. The definition of integration used in this study referred to course-of-study of units integrating subject matter around central themes “big ideas” to obtain desired outcomes. Units included informational materials, activities for extensions and applications and a bibliography of visual aids, and suggested songs and music, literature, and pictures to assist in integrating such content. Participants included 73 teachers and approximately 2,000 fourth and fifth grade students. Three types of classes were used: two experimental (used integrated curricula) and one control. Findings revealed integration maintained student achievement in fundamental skills. Students in the experimental group performed as well if not better in reading, spelling and arithmetic and acquired more factual information than those in the control resulting in more learning, stimulated interest and enthusiasm. With more time devoted to problem-solving and creative expression activities, content taught by the activity method enriched education.

Another notable study is known as the Eight Year Study, began in 1933 and was reported in 1942. This study examined whether a curriculum designed to meet needs and interests of 12\textsuperscript{th} grade students was effective as a college preparatory program and specifically interdisciplinary in nature. The Eight Year Study, comprised of 30 progressive and experimental high schools, proved that the students in the schools did “somewhat better” and were as well prepared for college as their counterparts but were more active in social and extracurricular activities (Akin, 1942, p. 112; Beane, 1995; Ellis & Fouts, 2001; Vars, 1996; Wraga, 1997).
Interest in integration has increased among scholars, administrators, and educators and studies have been implemented to examine the impact on education in the United States (Barr, 2006; Corn, 1993; Eaton, 2006; Lyons, 2008; McGowen, 1988; Pfeuffer 1981; Pyne, 2006; Youm, 2007). However, studies based largely on qualitative means with use of extensive observations and interviews and are relatively rare (Grant & Paige, 2007; Wallace, Rennie, Malone, & Venville, 2000). Czerniak et al. (1999) assert that the lack of empirical research designs may be attributed to the ambiguity in the term. “At the most basic level, a common definition of integration does not exist that can be used as a basis for designing, carrying out, and interpreting results of research” (p. 422). Berlin (1994) reported that of the 423 articles presented at the 1991 Wingspread Conference on integration, 99 were related to theory and research and an even fewer, 22, were researched based. Scholars admit that there is a lack of empirical studies in the field supporting the idea that an integrated curriculum is more effective than the traditional discipline-based curriculum (Czerniak et al., 1999; Ellis & Fouts, 2001; Lederman & Niess, 1997). Grossman, Windeburg, and Beers (2000) echoed the concern when stating that literature on the topic of interdisciplinary studies “is almost entirely comprised of idealized descriptions of programs and how to put them in place, and almost entirely devoid of descriptions of what actually happens when theory meets school practice” (p. 9).

Of the research studies conducted, most supported curriculum integration. Key findings on integration included: the importance of collaboration and communication where students benefit from the strengths each teacher brought to the topic (McGowan, 1988; Youm, 2007); an increase in motivation (Miller, 1995); students experiencing
personal and educational growth (Corn, 1993); facilitation of topical and natural connections and higher-level thinking (Barr, 2006; Miller, 1995); an enhanced understanding of core subject disciplines (McCullar, 1998); improved quality of instruction (McGowan, 1988); students who experience integrated curricula do as well if not better than those in the separate subject curriculum (Beane, 1995); increased interest and achievement in integrated instruction (Greene, 1991; Stevenson & Carr, 1993); an increase in standardized achievement scores (Greene, 1991; Vars, 1993).

Concerns over integration include diminishing the integrity of disciplines of knowledge (Beane, 1995). Critics argue that each discipline functions primarily through different ways of knowing (Grant & Paige, 2007). Consequently, curriculum integration should not be implemented unless there is thorough in-depth knowledge and understanding of the separate subjects. In doing so, the content then becomes the vehicle for essential understandings (Beane, 1995; Drake, 1993; Irwin & Reynolds, 1995). If this is not available, at the very least participating teachers must be taught skills of the various art forms through intensive in-service training (McGowen, 1988). Barr’s (2006) case study examining collaborative teaching practices among fine arts specialists in an elementary setting supports such a case as findings included that all teachers need training working collaboratively to design and implement integrated lessons. Gardner and Boix-Mansilla (1994) also stress the importance of integration implementation when stating the following:

[…] such work [interdisciplinary work] can only be legitimately attempted if one has already mastered at least portions of the specific disciplines. Unfortunately, much of what is termed “interdisciplinary” is actually predisciplinary work – that is, work based on common sense, not on the mastery and integration of a number of component disciplines. (p. 15)
Theoretical underpinnings.

The primary theoretical framework on interdisciplinary curricula has roots that can be traced back to the progressive education and constructivism (Bresler, 1995; Czerniak et al., 1999; Ellis & Fouts, 2001; Youm, 2007). As discussed earlier in this chapter, progressivism in education began as an attempt of the liberals to transform schools so that it might play a more important role in the social reform measures of the early 20th century and sought to make education become life (Miller, 1966, p. 8).

Students learned through a child-centered approach with emphasis on “creativity, activities, ‘naturalistic’ learning, real world outcomes and above all, experiences (Brown, 2001, p. 23). Prominent philosophers of this movement, including Dewey and Rousseau, desired to develop new subject matter that would unite schools and the realities of life. Practitioner Francis Parker contributed by promoting creative development in the child (Miller, 1966). Without this connection, school learning would be irrelevant to the real world and therefore have no meaning to the average child. It stresses life as an experience under the careful guidance of the teacher (Oberholzer, 1937). To assist in making sense of life’s experiences and reduce the fragmentation of learning, integrative and holistic approaches were being proposed (Vars, 1991) that included the arts. Dewey (1925) emphasized that the social aspects of the arts contributed to the development of the individual child. The arts can also contribute to the understanding of life as it assists in exploring the human condition (Palmer, 2004). “The arts are valuable insofar as they provide children with the opportunity to further exercise the general skills that underlie component involvement in everyday life” (Brown, 2001, p. 85). Miller (1966) investigated, among other things, the relationship between the ideals of progressivism
and how they were interpreted in practice within the field of music education and found that “music was perceived as an agent for the understanding of culture”; and, as such, it served to integrate much learning through the medium of the activity program (p. 14).

The constructivist approach also had its place within the integrated movement as it contends that learning is an intellectual process in which the learner forms, or constructs, new knowledge by combining new ideas with those acquired during previous learning experiences (Ammon & Kroll, 2002; Schunk, 2008). Such learning should be connected to real world and school activities and spark students’ interest. It should be derived from multiple perspectives resulting in acquired knowledge, or cognition, to be more meaningful (Ellis & Fouts, 2001; Krug & Cohen-Evron, 2000; Youm, 2007). Brooks and Brooks (1993) also asserted that thorough understanding is constructed when learners make connections between prior knowledge and new experiences, a union among ideas. This thought points to the theory of transfer of knowledge which is the most important aspect in achieving effective integration. Roucher and Lovano-Kerr (1995) discuss transfer of knowledge as a critical integration strategy when stating

A major theoretical strategy involves the importance of teaching students how to make connections and to transfer and apply learning. Students may learn isolated facts about topics, but they are not taught how these facts fit together in an understanding of the world, nor are they taught how to transfer information from one compartment or topic to another. (p. 23)

*Transfer of knowledge theory.* Serpell, Boykin, and Madhere (2006) define “transfer” as the ability to use skills accrued from one subject area and apply those skills to another subject area under a different context and suggest that poor academic achievement can be linked back to the inability to “transfer.” Madsen (1986) also asserts
that “transfer” is essential and makes applying cognitive information learned in any format useful in one’s own situation.

Thorndike and Woodworth (1901) examined transfer of learning, specifically in regards to the improvement of use of one’s mental function on the efficacy of other functions. They reported that participants did well on tests to measure specific content they practiced; however, did not transfer that same learning to a new situation. Other studies examining transfer have found reasoning for Thorndike’s initial findings. Bransford and Schwartz (1999) assert that in order for transfer of learning to be effective there must be a sufficient degree of original learning. Several studies have also supported that the manner in which information is learned also affects later opportunities for transfer (e.g., learning for understanding (Brown & Kane, 1988; Chi, deLeeuw, Chiu, & LaVancher, 1994), presenting information in the context of problem solving (Adams et al., 1988; Michael, Klee, Bransford, & Warren, 1993) and presenting concepts in multiple contexts (Bransford, Vye, Kinzer, & Risko, 1990).

With all the studies contributing to evidence and non evidence transfer, Bransford et al. (1990) assert that Thorndike’s initial conclusion that transfer rarely occurs in practice and the likelihood for an occurrence is directly related to the parallels or likeness between the two situations. Transfer occurrences between one group of specified skills and another is possible only if the skills seemingly share similarities (Brown, 2001). “Eisner (1992, 1994), for example, agrees that the aesthetic perception in the arts may very well exercise deep faculties of the mind in common with other subjects. Nevertheless, the value of the arts he says does not reside in the subconscious linkages with enhanced skills in numeracy and literacy. The transferable benefits of the arts need
to be demonstrated more directly for the educational gaps in the curriculum to be filled (as cited in Brown, 2001, p. 87).

Williams (2007), who explored transfer of knowledge relationships through the context of business administration, identified two requirements for successful knowledge transfer as replication and adaptation. “Adaptation and replication are distinct transfer mechanisms that firms use simultaneously when transferring knowledge. Both contribute to transfer, which leads to improved efficiency”. Transfer of knowledge relationships occur when one firm, in need of content to improve existing conditions, looks to a source partner for knowledge on how to meet the need. The firms (telecommunication services) in this study face simultaneous pressure to expand networks, improve service quality, establish positive customer relationships and eliminate waiting lists for service, so they turn to their partner for many types of knowledge (Williams, 2007). His examination of the effectiveness of the replication/adaptation model in the setting had the following results:

[…] adaptation increases significantly as the length of the relationship arises (time). Thus understanding gained through experiences in the relationship does increase the use of adaptation by the receiving partner, (2) replication and adaptation each have a positive and highly significant impact on knowledge transfer. Firms that engage in higher levels of replication and adaptation also report greater transfer of knowledge from the source partner (3) knowledge transfer has a positive significant effect on efficiency improvements, (4) replication and adaptation then lead to increased knowledge transfer, which in turn leads to greater performance gains at the receiving unit. (p. 879)

Although he describes transfer in the context of business firms, it can be analogous to education. Williams (2007) states replication involves the exact copying of a group of activities, which enables transfer of the activity “without the need to
understand their causes, consequences, and interdependence” (p. 867). Researchers have proposed that businesses replicate knowledge so that transfer can occur in any setting, therefore, if applied in the education setting, replicating knowledge in one subject area grounds the initial learning in another subject area. Then transfer of knowledge to another subject would not be hindered by the blending of boundaries curriculum integration employs.

Studies have documented the effects of the near transfer theory regarding music instruction. Gromko (2004) examined sight-reading skills in high school students and found that those who develop musically can therefore develop their spatial and kinesthetic intelligences. Other studies support the claim (Gromko & Poorman, 1998; Hetland 2000; Rauscher et al., 1997).

Because music sight-reading involves audiation and tonal and rhythmic patterns, comprehension of a graphic notation system with both spatial and textual qualities, and highly coordinated kinesthetic action in performance, the development of musical intelligence may encompass a wide range of intelligent action, ones that have near-transfer effects to other important areas of cognitive development. (Gromko, 2004, p. 6)

**Curriculum Integration.** Curriculum integration, also called core curriculum (Vars, 1991), has been described as involving two or more traditional disciplines and combining them to some degree or making the connections between them (Irwin & Reynolds, 1995) instead of mastering fragmented pieces of information restricted by the boundaries of subjects center (Beane, 1995). Integration is a strategy for disciplinary learning across disciplines (Beane, 1995; Irwin & Reynolds, 1995; Youm, 2007) and begins with the “identification of organizing themes or centers for learning experiences” (Beane, 1995, p. 645). Some believe curriculum integration allows knowledge to be explored through the context of problems, issues, concerns and interests at hand. With
this being the case, students expand their understanding of themselves and the world around them. Knowledge comes to life and has meaning and therefore is more likely to be learned (Beane, 1995). Themes are drawn from real life experiences and include but are not limited to conflict, culture and identity, jobs, careers, money, environment and, living in the future (Beane, 1995). Although they do not label it as curriculum integration, Krug and Cohen-Evron (2000) do explain it as a curricular practice in and of itself. They contend that use of this practice helps to generate, construct and reconstruct knowledge in which students learn more about “community conditions and concerns.” It is a way to conduct inquiry about personal and socially relevant ideas, issues and problems across various subjects (p. 269).

“[Integrated curriculum] improves higher-level thinking skills, heightens the opportunity for the transfer of learning, heightens a sense of initiative and autonomy, and improves students’ motivation to learn” (Youm, 2007, p. 1). Studies of the brain also support that the brain searches for patterns and interconnections as its pathway in making meaning (Caine & Caine, 1991; Kovalik, 1993).

Historically, educational researchers have documented various curricular approaches: interdisciplinary curriculum (work) (Irwin & Reynolds, 1995; Jacobs, 1989; Youm, 2007); multidisciplinary and transdisciplinary (Drake, 1993; Gardner & Boix-Mansilla, 1994); metadisciplinary (Gardner & Boix-Mansilla, 1994); integrated curriculum (Beane, 1995; Youm, 2007); cross-disciplinary study (Boston, 1996); interdisciplinarity (Klein, 1990). “These approaches encourage discipline specialists to work together while maintaining the integrity and authority of their particular field of expertise” (Krug & Cohen-Evron, 2000, p. 267). The following will provide a brief
overview of the most common approaches discussed in the fields: interdisciplinary, multidisciplinary, and transdisciplinary.

Curriculum approaches.

**Interdisciplinary.** Interdisciplinary is defined as “a knowledge view and a curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience” (Jacobs, 1989, p. 8). “Interdisciplinary studies also tend to share a belief in relatedness among experiences, while recognizing that each discipline is a discrete body of knowledge with boundaries and should be examined as such” (Irwin & Reynolds, 1995, p. 15).

Drake’s (1993) interdisciplinary approach involves identifying commonalities across disciplines. “[...] content and procedures of individual disciplines are transcended; for example decision-making and problem solving involve the same principles regardless of discipline” (p. 38). Drake also suggests the use of a curriculum planning wheel to identify a theme and emphasize skills common to the subjects.

**Multidisciplinary.** A multidisciplinary curriculum is viewed through the lens of a discipline “that includes content from other disciplines to increase relevance” (Drake, 1993, p. 35). It is achieved through brainstorming, using semantic webbing, clustering and re-clustering. Krug and Cohen-Evron (2000) identify this as an arts curriculum practice that enlarges the scope and breadth of an initial idea or theme. It essentially eliminates the boundaries among subjects while allowing teachers to work with individual realms of familiarity (Drake, 1991).

**Transdisciplinary.** Through a transdisciplinary approach, themes, strategies and skills become closely connected when set in real-life contexts. Disciplines seem to be
limitless with this approach and involve skills such as time “management, dealing with ambiguity, perseverance and confidence” (Drake, 1993, p. 41). This approach also allows students to examine concepts as they appear in political and physical discourse (Gardner & Boix-Mansilla, 1994). Krug and Cohen-Evron (2000) describe this type of approach as combining different ways to perceive and think about concepts and ideas through several lenses provided by various disciplines and involve emphasis on personal and collective interpretations of a subject, idea or theme.

**Integration as a curricular practice.** Although it is the attempt to achieve integration, there is ongoing discourse on how integration is manifested in curricular practices (Beane, 1995). Irwin and Reynolds (1995) and Beane (1995) explain that integration is in a sense viewing disciplines without boundaries therefore the strategies should aim to use knowledge that is not limited by subject or discipline.

These boundaries are forever expanding and contracting, and at times they are extremely hard to pin down. While characteristics of each discipline should be taught, educators should also explore integrative or interdisciplinary experiences as a way of testing, adapting, or revising the contemporary view of arts disciplines. (Beane, 1995, p. 14)

Anderson (1995) agrees that integrative strategies should make appropriate connections with clear objectives with the final goal being wholeness or synthesis. Without this important aspect, teachers often fail to maintain the integrity of all subjects involved. Davison et al. (1995) identified “five types of science and mathematics integration: discipline specific integration (integration across mathematical areas), content specific integration (integrating one math concept and one science concept, e.g. measurement and dinosaurs), methodological integration (using good teaching techniques such as the learning cycle model in mathematics and science) and thematic integration
(taking a topic such as oil spills and integrating it with science, mathematics, language arts and social studies).

Miller’s (2003) two-year case study presented a similar view of language arts and music integration. The study examined use of music and literacy integration of a whole language first grade classroom designed specifically to infuse classroom objectives within the context of music in order to maintaining the integrity of the music curriculum. Results indicated that the students were attentive and enthusiastic while participating in integrative activities. Scores on music knowledge pre and post tests given to the students also suggested that the curricular integration did not jeopardize the music education goals. Analysis of the integrative process produced five categories of integration shared between the two educators: topical (taking a topic and integrate it in context, e.g., bears), conceptual (integration on concepts shared between subjects, e.g., sound, patterns), higher-order thinking (integration involves the strategies used in promoting higher level thinking skills, e.g., analysis [compare and contrast]), related skills (integration occurs through use of common or related skills used by both subjects, e.g., use of punctuation) and pedagogical (integration based on common pedagogical practices or philosophical beliefs, e.g., constructivism).

Fogerty (1991) also discusses ten practices (fragmented, connected, nested, sequenced, shared, webbed, threaded, integrated, immersed, networked) towards an integrated curriculum which range from a fragmented approach of separate and distinct disciplines to a network design where students, focusing on a discipline, works collaboratively with experts of various fields.
There are identical practices among the literature although what they are called differ which further demonstrates the expansive nature of integration and how it is labeled. For example, Miller’s description of pedagogical integration is very much the same as Davison, Miller, and Metheny’s methodological approach. Likewise, Miller’s concept approach is also the same as that of Davison, Miller and Metheny’s content specific integration and Fogerty’s connected integration model.

Reservations for use of integrative strategies include lack of knowledge about integration subjects, limited educational budgets, teachers’ limited time for cooperative work, lack of administrative support, shortage of trained music teachers, lack of defined objectives for assessment (Keating, 1992; McGowen, 1988; O’Brien & Stewart, 1990; Paxcia-Bibbins, 1993; Whitaker, 1996; Youm, 2007). While writing about integrated curricula, Drake (1993) asserts that it should only be applied when educators use it as an authentic path for students (Hellwig, Monroe, & Jacobs 2000). Vars (1986, 1987, 1991) outlines three forms of delivering integrated curricula;

- total staff approach, in which most of the school’s staff agrees to deal with some aspect of an all-school theme or topic or brief period of time; interdisciplinary team approach in which several teachers of different subjects are assigned one group of students and encouraged to correlate at the least some of their teaching and block-time (self-contained) classes, in which one teacher is responsible for instruction in several subjects during an extended segment of time. However, in the case of self-contained classes the degree to which the subjects are integrated varies from teacher to teacher. (p. 14)

Independent or collaborative approaches are often dictated by the environment. Usually, “ordinary” schools implement independent approaches to integration whereas “arts focused” schools or programs implement the collaborative approach. Either way both approaches can be beneficial. Vars (1996) investigated studies implementing both,
the one-teacher-teaches all approach and interdisciplinary organization teaching and found there to be benefits to both approaches.

In an attempt to develop an interdisciplinary middle school curriculum to focus on a holistic approach, Drake (1991) and her colleagues discovered that the task was not as easy as they perceived it to be and required them to disassociate with previously held assumptions on how integration operated. The team, consisting of six individuals from across the province each having expertise in different subject areas, met to develop an integrated curriculum based around themes. The initiative, funded by the Ontario Curriculum Superintendents’ Cooperative, found that ultimately it required them to dissolve the boundaries between subjects. Key factors they noted regarding the development of an integrated curriculum included:

1. Content cannot be manipulated to fit a linear framework of knowledge acquisition. Essentially, the content should not change but rather the approach in which one decides to explore and teach the theme, must change.

2. The ability for arts strategies to be used to teach facts is contingent on the expertise of the teacher. “For example, a teacher trained in art could find ample places within any theme about art techniques” and

3. “…subject areas are not given full acknowledgement in interdisciplinary planning; this is usually due to gaps in the curriculum team’s knowledge base and experience, not the lack of a proper place for the subject”. (Drake, 1991, p. 22)

Bresler (1995) observed various manifestations of integration in the daily curricula of three elementary schools (K-8). Data collected over a three-year ethnographic study of arts education focused on classroom teachers (teaching the arts), music specialists and artists-in-residence. Through intensive observations and interviews with teachers, principals and artists-in-residence and reviews of curricular materials, the researcher identified four integration styles each having its own set of goals, content, pedagogical approaches and roles within the school: (1) subservient, the arts serve the
basic academic curriculum and its contents, pedagogies and structures; (2) co-equal integration, which brings the arts as an equal partner “integrating the curriculum with arts specific content, skills, expressions and modes of thinking”; (3) affective integration, which emphasizes feelings and attitudes evoked by and towards the arts, as well as student-centered learning and initiatives particularly incorporating ideals of creativity and self-expression that teachers and principals acknowledge are not served by the academic curriculum; and (4) social integration, which emphasizes the social function of the school and its role as a community like PTA meetings, holidays, honor programs, and ethnic evenings. The arts were instrumental in making these events successful. Although these were theoretical in nature, the researcher noted that the practices were not pure in execution and were manifested in combinations. It was also noted that although the research literature is based heavily on the co-equal integration, it was rarely seen in practice due to the difficulty of implementation. Bresler (1995) stated the following:

The co-equal approach, cognitive integration style attempts to integrate the arts into the curriculum in ways that draw and build on the characteristics of art, requiring classroom teachers to provide direction and guidance that often transcend visions and current abilities [...] Whereas the subservient, affective and social integration styles do not require any major changes in teacher thinking and attitudes, the co-equal, cognitive style entails a fundamentally different way of conceptualizing a discipline in terms of content, goals, and sometimes pedagogies. These new conceptualizations often call for a change of existing structures, in that they involve collaborations among groups of people who do not traditionally work together. (p. 35)

Findings regarding the subservient approach are similar to those of Stake, Bresler, and Mabry (1991) who observed arts in the elementary school. Discussed in the report was that teachers used the arts component as topical enhancers and motivators for learning basic concepts. For example, the researcher observed songs like Twenty-Nifty and
The Planets used in lessons on the United States and Social Science respectively. He also reported few cases in which the expectation of learning arts content was as important as other subjects. They concluded that although inclusion of the arts was the goal, little emphasis was made to meet authentic arts goals.

Integration in public schools. Tytler (2004) argues that one disadvantage of an integrated approach is that one or the other learning area is trivialized. This often occurs in the arts when used in disciplinary studies. Typically, in this situation, the arts have been relegated to a subservient role in scholarly literature and in practice (Bresler, 1995; Drake, 1993; Giles & Frego, 2004). An example of a “subservient role” would be when a teacher presents a unit or lesson to students and “uses” the arts as an activity, assuming they created an integrated lesson. In her observation of the development and implementation of an integrated arts-focused curriculum at an elementary school, Youm (2007) noted key factors to include scheduling, determining the topic, teachers’ planning meeting, preparing class activities, implementation and evaluation. Teachers involved had specific roles and communication was an ongoing process. Most notably, collaboration was a key component. During implementation, use of the same vocabulary was used by each teacher.

“For many arts educators, the problem is finding a balance between multi-arts and cross-disciplinary approaches, while at the same time ensuring that every child receives a pattern of sequenced learning in each separate discipline” (McPherson, 1995, p. 25). Undoubtedly, music educators have mixed emotions on the topic of interdisciplinary curricula (Whitaker, 1996) including feelings of helplessness, frustration and/or concern that the value of music education may diminish as a result of
classroom instruction time being relinquished to assist, tutor or teach literacy (Fisher, McDonald, & Strickland, 2001). Educators are also concerned about the planning of instruction in an interdisciplinary curriculum since music teachers are not certified to teach other academic areas (Wiggins, 2001). Conversely, research demonstrates that developing and sustaining effective integrated curricula is contingent on the role of the arts specialists (Andrews, 2006; Appel, 2006). Kassner (2002) suggests reasons for integration by stating:

[...] music educators must make the effort to explain how music reinforces learning other subjects. Specifically, we can strengthen music’s role in the curriculum by learning to speak the jargon of reading teachers. Rather than abandoning music instruction to teach reading, we need to teach music first and foremost and teach reading secondarily—as a by-product of music instruction. (p. 21)

Kassner (2006) suggests that the concept of integration is not the problem; however, problems develop when too much emphasis is placed on one particular subject, unbalancing the curriculum and minimizing learning in other discipline areas.

Few studies examine how integrated instruction involving music is developed and implemented in the elementary setting (Youm, 2007). A study done by Wilson (1995) supports such a claim when investigating pre-service teacher attitudes toward teaching reading found that pre-service teachers still feel that their sole responsibility is toward their content area. Gerber and Garrity (2007) examined music teacher attitudes toward teaching reading skills in the music classroom. Results of a survey reported that 78.6% of the respondents “agreed, to varying degrees, that they indeed teach language reading skills in music classrooms.” Also, they were favorable toward the inclusion although not significantly eager about the notion (p. 78). O’Brien and Stewart (1990) found that pre-service choral and instrumental secondary teachers felt inadequate in teaching reading
because of the lack of instructional materials, insufficient training, and inadequate classroom teaching time available to spend on incorporating language arts skills during music instruction.

Adversely, several studies have sought to empirically measure the effects of a reading and music integrated curriculum. Findings concluded that music intervention positively affected the outcome of reading achievement scores (Eaton, 2006; Lyons, 2008). Additionally, Eaton (2006) found improvement in music achievement. Register (2001) examined the effects of a music literacy intervention curriculum on pre-reading and writing skills of four and five year old students (n = 50). An experimental group (n = 25) participated in a 30 minute music intervention curriculum designed to specifically teach pre-reading and writing skills through explicit instruction across all developmental areas. The duration of the study was one school year in which results indicated that those students who participated in the treatment intervention demonstrated a significant increase in the ability to learn pre-writing and print concepts versus those who did not. The control subjects who received non-explicit reading instruction with exploratory music lessons did not increase in reading ability.

Subsequently, five studies (Darrow et al., 2009) measured the efficacy of the Register Music /Reading Curriculum implemented in 2007. The curriculum was written for the second grade level because the researcher viewed this grade as a critical preparation stage for the reading competency tests that determine promotion to the third grade. In addition each of the five studies informally observed student/teacher enthusiasm for the integrated curriculum. Although four out of the five studies demonstrated higher total test scores compared with the control sites, the gain was not
significant. Although the researchers were disappointed the curriculum did not yield promising results in its effects on enhancing literacy learning, it did however prove to be engaging for all students as demonstrated in post treatment writing samples. This curriculum, which replaced the reading instruction in most sites, provided an equal platform for all learners to participate. It also reinforced reading skills and set the groundwork for the development of comprehensive music curriculums that promote effective cross-curricular connections. Although these interventions have demonstrated positive impacts on student learning, it must be noted that the implementers of the integrated curriculum were researchers and music specialists with background reading knowledge.

Curtis (2007) used a case study approach to observe the way a kindergarten teacher and music teacher provided literacy experiences for young children within their respective classrooms (total 437 recorded incidences). Data collected revealed that both classrooms provided evidence of support for phonemic awareness, phonics, fluency, vocabulary, comprehension and concepts about print. Further analysis revealed that the classroom teacher provided more incidences of instruction coded as phonemic awareness (20%), phonics (22%), and comprehension (18%) and with the classroom music educator provided more evidence of coded events for fluency (29%) and vocabulary learning (23%). Barry (2004) states “while it certainly may be useful to explore the positive effects that music and arts instruction may have upon non-arts objectives, it seems logical that we should also be concerned with the impact that integrated curriculum has upon music education” (p. 59).
Barry and Schons’ (2005) qualitative study investigating four music teachers working in schools implementing a first-year integrated curriculum found the music teachers’ response to the approach alternated between those almost making no adjustments in their instructional approach to those who conceding to the one-way integration design where music is used to reinforce concepts. Although three of the experienced teachers were concerned about how the purpose of music was perceived by other teachers and administrators, the first-year teacher was most susceptible to the misconception of integration. Among their observations, the researchers noted that the teacher with the least experience seemed the least concerned with two-way integration and was the most willing to jettison her music objectives for other activities such as drawing or creative writing. She stated that other teachers consult her when they need special music for a topic they are teaching and that she consults other teachers’ lesson plans and then adapts her lesson plans to complement them. (p. 64)

The outcome produced concerns from scholars investigating music integration that pre-service music teachers who are not prepared to integrate music with other subjects may fall under that same fate and integrate where music objectives and content may be compromised. According to Barry and Schons (2005) and Snyder (1996), music teachers who are unprepared to deal with integration may “lose sight of music learning objectives” (p. 35). One of the recommendations from this study suggested for universities/colleges to incorporate integration concepts and strategies into the teacher preparation programs.

**Integration in higher education institutions.**

A move toward interdisciplinary studies within the general education curricula in universities and colleges is emerging in the literature (Boix Mansilla & Duraising, 2007; Lattuca, Voigt, & Faith, 2004). Advocates suggest that the separate-subject opens the
door for a disconnect between content (facts and skills) and real life (Beane, 1995; Drake, 1993; Gardner & Boix-Mansilla, 1994). Beane (1995) contends that “there is no unity, no real sense to it at all. It’s as if in real life, when faced with problems or puzzling stations, we stopped to ask which part is science, which part mathematics, which part art, and so on” (p. 643). Unifying knowledge of the content enabling students to integrate facts and ideas, theories and applications will help prepare them to think globally in their view of teaching and how it will have an effect on national culture (Palmer, 2004).

Several universities have explored the possibility with varying results. Orillion (2009) examined the relationship between interdisciplinary curricula and student outcomes and found that depending upon the course being studied, the outcomes did not align with the course proposal or literature on interdisciplinary curricula. Her two-year descriptive study findings “suggest that the relationship between learning outcomes and interdisciplinary curricula is mediated by institutional culture. Moreover, to understand the relationship between student outcomes and the curriculum, it is necessary to examine the curriculum as it is enacted in the classrooms” (p. 16). In a study investigating interdisciplinary teaching in higher education, Nikitina (2006) identified three integrative strategies as contextualizing, conceptualizing, and problem centring. Contextualizing requires “embedding knowledge in history, culture, philosophical questions and person experience” (p. 257). Essentially it calls on the human sciences to interpret the human condition where students identify themselves in the “fabric of history and society” (p. 257). “It builds broad connections among different disciplines using culture, history and philosophy contexts” (p. 268). Conceptualizing is guided by the scientific method using “scientific and mathematical thinking beyond the facts and singular theories to the level
of underlying concepts like linearity, change and scale” (p. 261). Problem centering aims at generating tangible outcomes and change and uses ill-structured real-world problems as an axis of connection among disciplines” (p. 264).

Particularly regarding the preparation of pre-service teachers to implement integrative approaches the following studies have found varying outcomes. In discussing the study, Orillion (2009) reported that students participating in interdisciplinary curricula must have an understanding of the process of synthesis. The first step, supported by other researchers (Boix-Mansilla & Duraising, 2007; Boix-Mansilla, Miller, & Gardner, 2000) is the foundational understanding of a discipline. “Students must understand disciplinary theories, concepts and methods, in addition to the findings of the different disciplines: “the process of synthesis requires an appreciation of the full complexity of the disciplines involved, especially an awareness of their often unconscious assumptions, in order to discern the underlying common ground or conflict between their insights” (Orillion, 2009, p. 2). Palmer (2004) examined, among other things, the education within the general education courses for the music education major. His findings reiterated the same effect. “[…] while the student studies specific subject matter, because that is the usual method of presenting knowledge, the connective tissue between one field and another is usually deficient” (p.131).

In the literature review on integration between science and mathematics, Czerniak et al. (1999) found most studies focused on using process skills, topics and issues rather than content to integrate. They, along with other researchers (Lehman, 1994; Mason, 1996), provide recommendations for pre-service teachers in preparation for integration as they (1) must be familiar with state and national reform recommendations, (2) should
receive instruction in the integration of science and mathematics, including the opportunity to critique integration curriculum materials, and (3) have opportunities to experience the teaming process, both in the development of an integrated unit and in implementation with an experienced classroom teacher.

Although interdisciplinary learning within the general education curricula in higher education is being examined interdisciplinary practices in music are not a common practice, Furthermore, little is known about such practices occurring among upper level major courses for education majors. Palmer (2004) expounds on this concern when he states

The general education cores do not take the steps necessary to present integrated knowledge or to advance consilience. Rather, they make the incredible assumption that by partaking of the core offerings in smorgasbord fashion, a magical event, if not creeping realization, will occur at some point in the student’s educational career in which all knowledge will present itself as a whole, connected and indivisible. (p. 131)

Grant and Paige (2007) participated in a new innovative project at a university in developing a course aimed to teach pre-service teachers how to plan for and teach integrate curriculum units during their middle school placement. The interdisciplinary team was comprised of instructors in the following areas: Science, Mathematics, English, Design and Technology and Physical Education. Approximately 100 students in the third year of a Bachelor of Education degree program (Grades 3-9) enrolled in four classes. The construction of the course included various readings on integrated curricula, a 6-week student teaching practicum in which they made observations on occurrences of integrated activities and a roundtable at the conclusion of the practicum. Students were also placed in groups of three for the duration of the practicum to provide support for each other, share ideas and engage in the practical experience of planning as a
collaborative process. Focus in the planning session was on deciding to develop essential question(s) that could guide the planning of an integrated unit. Students were encouraged to connect integrated themes to real life situations and have their students view the topic through a socially critical perspective.

In their review of the study, the researchers documented how the experience impacted both the pre-service teachers and the staff involved in teaching the course.

A number of key issues emerged from the trial, including:

1. the teaching team assumed that because they had completed a course in each curriculum area they would have a basic knowledge in the different ways of knowing. What was found was that the pre service teachers were really only confident in their general study area of expertise. The curriculum courses had not provided sufficient background for them to integrate effectively.
2. the mismatch between school practice and our innovative integrated curriculum was difficult for many of the pre service teachers. Many were in situations in which it was difficult to teach the planned unit.
3. there was a constant challenge for the teaching team. Working in interdisciplinary teams involves enormous amounts of planning, which of course has effects on other teaching, research and administrative commitments at the university. (Grant & Paige, 2007, p. 10)

The researchers felt the overall experience benefited the students in that they were able to develop essential questions where a holistic approach to curriculum construction was achieved. Students even demonstrated an increase in their understanding of integrated curricula as well as their understanding and planning of particular subject areas.

As integration continues to be used in schools, it has been widely accepted as a curriculum component in many methods courses taken by pre-service classroom teachers (Colwell, 2008). Interdisciplinary studies in music most often investigates how the integration process works for the course that teaches pre-service education majors to include music in the general classroom (Apfelstadt, 1989; Baker & Saunders, 1994;
Barry, 1992; Byo, 2000; Choy & Kim, 2007; Kim & Choy, 2008), however few examine the reciprocal process of integrating reading and other subjects in the music classroom. This is a key area of focus as the literature has emphasized that an interdisciplinary approach eliminates a uni-mode way of instruction and bridges the gap between disciplines. “It encourages discipline specialists to work together, while maintaining the integrity and authority of their particular fields of expertise” (Krug & Cohen-Evron, 2000) and provides students multiple ways to construct knowledge (Register, 2001).

Regarding reading, specialists in the field of music and reading assert that integration between the two subjects could promote learning on both sides, while music can aid in language development, musical development can occur simultaneously (Wiggins, 2001).

Barry (2008), who advocates the two-way integrated approach similar to Bresler’s co-equal integration approach, contends that it is the responsibility of higher education institutions to prepare pre-service music teachers to implement integrated curricula. Her research suggests three parameters for music education courses: information, collaboration, and advocacy. First, students should be taught all the knowledge and information surrounding two-way integration so that they understand how to implement the process with respect to all disciplines involved. Secondly, opportunities for collaboration should be provided so students are well-equipped to work in partnership with their colleagues from various disciplines. “Music teacher education can equip music teachers with strategies for participating actively and collaboratively as part of a faculty team of professional educators representing different academic disciplines” (p. 36). Thirdly, students should be prepared to become advocates on music’s place, purpose and benefit to the basic curricula.
The overall music education curriculum [K-12] consists of the following components: general, choral, instrumental, jazz, theory, history and technology. In some schools additional components have been added to address multicultural needs (e.g. world drumming, steel bands, strolling strings, mariachi, gospel choirs, salsa bands, synthesizer ensembles) (Hinckley, 1995; Mills, 2006). Most music teacher preparation programs include the basic core courses that develop musicianship (e.g., theory, history, performance etc.). In addition, within teacher preparation courses most programs culminate the degree with internships or student teaching experiences although the specifics of these internships vary among institutions (Wilson, Floden, & Ferrini-Moody, 2001). Snyder (2006) claims

[…] the goal for the music and arts teachers is to understand the skills and understanding what the classroom teacher is delivering and to support these with a layered approach that addresses the music and other curricula simultaneously. When curricular knowledge is shared, many links become obvious and the resulting instructional changes lead to deeper student understanding. (p. 201)

Elementary Music Methods (or course equivalent) is an upper level undergraduate course required for all music education majors regardless of emphasis (instrumental, choral, piano, etc.). Content often taught in the course includes, but is not limited to, grade-level music content, philosophies, methodologies, and grade-appropriate materials of an elementary school music program. Often this course is taken prior to or simultaneously with student teaching. Other topics addressed in the course include but are not limited to: scheduling, teacher qualifications, curriculum design, principles of assessment, issues of classroom management, diversity and integration. Elementary Music Methods was chosen for this study because of the likelihood of this course including topics on integration was greater than other courses required for the major.
As a result of the various definitions of integration, for the purpose of this study, integration will be classified as inter-disciplinary learning with integration as the strategy. Specifically speaking, the researcher has taken the following stance moving forward with the study: disciplinary knowledge is the primary goal, inter-disciplinary learning is the secondary goal and integration is the strategy to achieve these goals.
Chapter 3

Methodology

Although several empirical studies present evidence of specific relationships between music and reading processes (Anvari et al., 2002; Gromko, 2005; Hahn, 1987; Lamb & Gregory, 1993), little research investigates pedagogical strategies that infuse reading strategies within music content. Of the research that exists, there is evidence that music and reading integration increases reading skills as well as promotes enthusiasm for learning (Curtis, 2007; Miller, 2003; Register, 2001; Register et al., 2007). As a result of the push to increase literacy achievement, teacher training programs are searching for ways to effectively prepare pre-service teachers to implement basic literacy skills in the classroom regardless of content area (Hinde et al., 2007), including music education programs. As a result, it is important to determine the most efficient and effective method in utilizing reading skills within the music classroom.

Purpose of the Study

In a broad context, the purpose of study was to investigate what, if any, reading course is currently included in the music education degree program of National Association of Schools of Music (NASM) accredited colleges/universities. Additionally, the study investigated the implementation process, including strategies, techniques and/or philosophical frameworks utilized when introducing and/or teaching music and language arts integration in the general music methods course.

Conceptual Framework/Worldviews

In preparation to investigate this inquiry, the researcher has aligned with both the postpostivism and pragmatist worldview. The worldview of a study guides the
researcher in the method of executing the study. It provides the strategy of inquiry in the collection of data, interpretation of results and measurement of outcomes

Postpostivism. Postpostivism, a modification of the positivist paradigm, "contends that empirical indicators can be used to approximate the truth; there is no method to obtain the absolute truth" (DeCuir-Gunby, 2008, p. 127). Within this framework, the researcher will take a scientific approach to the study, emphasizing empirical data collection. In regards to implementation, postpostivists researchers most often follow a series of logical steps during the procedure and believe there will not be one reality but multiple perspectives among participants (Creswell, 2005). Additionally, multiple levels of data analysis, computer assisted programs to encourage validity approaches and qualitative reports are included in this study (Creswell, 2005).

Pragmatism. This study was also guided by the pragmatist framework that believes in implementing multiple methods and procedures to find solutions to research questions (Johnson & Onwuegbuzie, 2004). In searching these solutions, researchers seek to find the "middle ground" among general philosophical paradigms. It also gives researchers flexibility in creating a design that "works" best for a particular research problem (Creswell, 2008).

Pragmatists obtain warranted evidence that provides us with answers that are ultimately tentative (i.e., inquiry that provides the best answers we can currently muster), but, in the long run, use of this "scientific" or evolutionary or practical epistemology moves us toward larger truths. (Johnson & Onwuegbuzie, 2004, p. 18)

Risks and Benefits

There were no potential risks to the participants. Each subject received a letter of consent, which outlined specifics of the study requesting their participation.
Confidentiality was assured as no names were stated in the final documents. Each participating university was coded for anonymity. Interview excerpts used in the final document used pseudonyms to protect the participants’ identity. Participation was completely voluntary, no benefits were provided.

**Ethical and Political Considerations**

The following section details how ethical and political issues were addressed throughout the research process. The researcher was careful not to provide advantages for one group of participants over another during the selection process and adhered to the process of obtaining permission prior to beginning any part of the study so that respect for all individuals was maintained. Data collected was kept and maintain only by the researcher and information was only shared with those directly involved in the study (advisor and committee members). To guarantee anonymity during the process of analysis, survey responses were coded for use in identifying those chosen for interviews.

Interviewees were contacted via email for consent and offered the option to participate or not participate. All interviews were conducted via telephone; prior contact was made by the researcher to determine a convenient day and time for each interview. Each participant was assigned a pseudonym to ensure anonymity and was offered the opportunity to receive a summary of results upon written request. The researcher only documented information pertinent to the current study and did not disclose any personal information that was shared “off the record” during the interview. Respect was given to those who chose not to participate in the study and if at any time one chose to be removed from the study all data collected up until that point would have been destroyed.
Political implications involve the multiple perspectives regarding the purpose of music in education. Many scholars believe music should be taught for music’s sake (Reimer, 1989) and therefore integration of academic subjects would negate the aesthetic purpose that music provides. Other scholars continue to suggest that music can have positive effects on other non-arts academic subjects (Barry, 2005; Mills, 2001; Schilling, 2002; Winner & Hetland, 2000). However, sometimes discourse arises when music is used to support other academics without acknowledgement of music content, which devalues the content area (Gerber & Gerrity, 2007). As more districts are requiring all specific content areas to provide forms of reading intervention, the present study presents scholars, educators, administrators and policy makers an approach on the process of how educators are trained to provide this intervention. The study provides an opportunity for each professor to illuminate the process of developing a unique degree program or inclusion of degree content (courses, etc.) that could serve as an example to other universities seeking to restructure an existing music education program to include language arts content/experiences. The intent of the study is to inform the higher education community of the benefits, concerns, and/or problems in addressing literacy and offer strategies on how music teachers can use reading content/experiences within the setting that enhance both music and reading. This is an area that has been largely discussed among scholars but has yet to be specifically outlined in a format that educators can replicate.

**Research Design**

The study used the quantitative descriptive research design. Quantitative research generalizes circumstances and situations in short, precise amounts of time to conclude
findings without influence or bias of the researcher; this is the nature of the empirical process (Creswell, 2005). There are various types of quantitative research designs each having specific procedures in which to collect and analyze data, including experimental, correlation, and survey. This study employed the survey research approach, which provided an overview of how reading integration occurs within music education programs, teacher preparation, philosophical foundations, and the perception of instructors involved in incorporating such a paradigm. “Survey researchers often correlate variables, but their focus is directed toward learning about a population and less about relating variables or predicting outcomes” (Creswell, 2005, p. 388).

Survey research is a non-intervention approach that seeks to describe trends with regard to “attitudes, opinions, behaviors, or characteristics” of a population or people through questionnaires and interviews (Creswell, 2005, p. 61). There are two basic types of survey designs: cross sectional, which collects data at one time; and longitudinal, which collects data over a period time. The present study employed the cross-sectional design in an attempt to evaluate a music education university/college program.

Additionally, the study includes influences of the narrative design of qualitative research to gain an in-depth understanding and further clarity how reading is integrated within music instruction. The study was implemented in three phases: conceptual analysis of degree programs curricula, survey, and interviews.

**Phase 1 (Conceptual content analysis).** A conceptual content analysis of programs of study was performed in order to examine the presence of reading courses within the music education degree program and under which department the courses are provided (i.e. education, music). Data collected determine the comprehensiveness in the
coverage reading content among the programs that include reading courses within the curriculum.

**Phase 2 (Survey).** General music course instructors (N = 102) completed a cross-sectional survey to determine instructor attitudes and perceptions toward the inclusion of language arts content within the general music methods course (or course equivalent) and if these perceptions are influenced by specific demographic information. The statistical analysis will provide a “descriptive” overview of the perception and attitudes and a chi-square analysis determined correlation, if any, between teacher demographics and questionnaire portions of the survey.

**Phase 3 (Relational content analysis/interviews).**

A content analysis of general music courses similar to the one conducted for the programs of study was implemented to guide in the selection of instructors for interviews. Interviews of selected instructors were conducted to further detail how reading content is introduced and integrated within the coursework of the general music methods course (or course equivalent), a course that is required by the NASM for music teacher certification.

**Phase 1 (Programs of Study)**

**Method.**

**Purpose.** A conceptual content analysis of programs of study was performed in order to examine the presence of reading courses within the music education degree program and under which department the courses are provided (i.e., education, music). Data collected determine the comprehensiveness in the coverage reading content among the programs that include reading courses within the curriculum.
Selection of Target Population. The target population comprised of four-year baccalaureate universities identified as NASM accredited public and private universities from the top 100 largest cities in the United States offering a bachelors degree in music with an emphasis in music education (N = 100). The population represented a national cross section of the division of regions adopted by the Equity Assistance Center in the U.S, was used which allowed the researcher to obtain a more focused geographical spread of the data (see Figure 7).

Data Collection Procedure. Upon approval from the University Institutional Review Board at the University of Memphis, the researcher proceeded with identifying the target population. For each university/college the program of study for the degree in Music Education (BM, BA, BME, etc.) was attained from the most current catalog/bulletin.

Data Analysis. A conceptual analysis was used to determine the number of specific themes or statements contained in the text. The examined text was programs of study obtained from the most recent catalog/bulletin from each college/university. The pre-determined set of categories or words most relevant to literacy and or literacy instruction was selected as opposed to literacy courses of the pluralist nature (e.g., multicultural literacy, technological literacy, etc). Terms selected were only those that referred to reading/language arts specifically including literacy and literacy instruction, reading, language arts, and language explicitly, which determined the qualifying use of the course in the study. It is understood that the term “literacy” is used interchangeably to refer to reading and writing as well as a person’s knowledge about a particular field. For the purpose of this study, the researcher analyzed the usage of the term literacy and
only included those that referred to reading/language arts specifically. For example, one program required a course entitled Computer Literacy under the education core; however the term “literacy” used within the title is not with regards to language arts but to the comprehensive acquisition of knowledge pertaining to the field of technology.

Coding was based on the existence and frequency of the concepts (pre-determined categories or words) within the degree program. Courses were coded numerically according to words and phrases that comprised the titles. For example, the number one was assigned to programs that include a reading course; a number zero was assigned to programs that do not include a reading course. The researcher also determined whether the course was assigned as a music education requirement or education requirement. A secondary analysis focused on course titles to determine relationships and characteristics between and among categories to determine the comprehensive coverage of reading content taught at the selected colleges/universities. This process involved a second coding process adapted from Gorksi (2009). From the initial extraction of phrases and words, the researcher asked the following questions of the data: (1) what pragmatic, theoretical and/or philosophical groundings were suggested implicitly or explicitly in the text? (2) what pragmatic theoretical and/or philosophical groundings were suggested by what is absent from the text? and (3) what does the text suggest about the content of the course? With this approach, the researcher examined the words and phrases for patterns of thought and meaning and what the terms suggested about the ways reading was addressed within the course. A second set of numerical codes (1-8) were selected to further analyze specific course titles. Definitions were developed for each code based on
inferences made upon the textual data by the researcher. The courses were assigned a code and then tabulated according to occurrences among courses.

**Phase 2 (Survey)**

**Method.**

**Purpose.** The purpose of the survey was to provide a “descriptive” overview of instructors’ attitudes and perceptions toward the inclusion of language arts content within the general music methods course (or course equivalent). Statistical analysis was completed with SPSS using frequencies, cross-tabulations and descriptive statistics. Chi-squared analysis was applied to determine relationships between the nominal and ordinal level of measurements.

**Selection of subjects.** The survey was administered to instructors of the general music methods course from the target population of NASM accredited colleges/universities (N = 100).

Each participant was contacted via email requesting participation and detailed information about the study. Upon confirmation of participation, subjects were emailed a cross-sectional survey. The final item of the survey offered the option for participants to provide an email address if they were willing to give more in-depth information on how reading integrated strategies are included in the general music methods course either through submission of course syllabus and/or interviews

**Instrument.** A researcher developed cross-sectional survey was used for this study. Cross-sectional surveys are used to measure and examine current beliefs, attitudes, and or practices (Creswell, 2008). The survey was in three parts: Part A (demographics) collected demographic information about participants including
specializations, public school teaching experience, years of teaching experience and current teaching position. Part B, (questionnaire), requested information with regards to their educational philosophy, integration and their perception of the school/department response to addressing language arts content. Part C, (request) solicited further participation by providing further information on reading/language arts integrative strategies demonstrated within the general music methods course.

A pilot survey was distributed to a similar population of music education coordinators (N = 12) to ensure that the survey meets the following criteria:

- Response categories were constructed for scalar questions so that people distribute themselves across categories rather than are concentrated in only one or two of them.
- Questions were clear and absent of ambiguity.
- Questions generated a high item response rate.
- Survey was accessible and the online program used was easy to navigate.
- Useful information was being obtained from the questions.

Revisions according to suggestions and recommendations received from the pilot population were made prior to distribution of the actual survey and included adjustments for question clarification and cautionary comments for the respondents.

**Data collection procedure.** The survey was distributed and data was collected through Survey Monkey, an online survey software and questionnaire service. A response rate was set at 30 - 35%. Participants received the link that connected them directly to the survey in the initial email sent that solicited participation with a two-week deadline for a response. A follow-up email was sent one-week prior to the deadline to encourage participants to complete the survey. Upon collection of the survey data, the following procedure was conducted in preparation for the analysis.
**Section A (demographics).** Demographic data was collected and later used as variables to cross tabulate with findings of section two of the survey. Each variable was coded numerically (integers) according to the following classification; nominal, ordinal, and interval and each variable will consist of various subgroups. Frequencies and percentages were generated to provide a general description of the demographic data.

**Section B (questions).** Participants responded to a series of questions and statements using a five-point Likert scale: 1 (strongly agree), 2 (agree), 3, (no opinion), 4 (disagree), or 5 (strongly disagree). To ensure significance among the response cells and use the chi-square comparison, cells 1 and 2 (strongly agree and agree) and cells 4 and 5 (disagree and strongly disagree) were collapsed.

**Data analysis.** Chi-squared analysis determined significant differences in the proportions for each predetermined demographic criteria group through use of the Statistical Package for the Social Sciences 16.0 (SPSS).

A value of \( p = .05 \) was selected for cross-tabulated data analysis. A priori value is P-value more than 0.05, denotes that the populations have similar proportions; P-value less than 0.05, denotes that populations do not have similar proportions. After calculating the p value (priori) from the chi-square analysis, the degree of frequency was determined. The researcher determined the degree of frequency to appropriately illustrate the chi-squared distribution by using the following formula where \( n \) = number of categories:

\[
(n-p) = \text{degree of freedom}
\]

The following statistical formula was used to determine if any observed distribution coincides with any particular distribution.

\[
X^2 = \frac{(\#\text{ observed} - \#\text{ expected})^2}{\#\text{ expected}}
\]
To ensure validity, the researcher determined survey error (collecting responses from the accurate population) by implementing the pilot study as it ensured that the respondents were those that could accurately answer the research question linked to this portion of the study.

**Phase 3 (Course Syllabi/Interviews)**

**Method**

**Purpose.** The purpose of the course content analysis was to examine the use of terminology and/key terms that indicated integrative occurrences within the course structure that served as the criteria for the selection of perspective interview participants. Interviews were conducted to gather more detail in regards to instructors’ philosophical approach to reading integration, background knowledge on reading and specific integrative strategies demonstrated in the general music methods course (or course equivalent), a course that is required by the NASM for music teacher certification.

**Selection of subjects.** Those participants who indicated interest in providing further information on integration in Phase 2 (survey) were the targeted subjects for the content analysis of course syllabi.

The instructors contacted for interviews were selected through criterion sampling. Each participant demonstrated evidence of inclusion of integrative strategies within the general music course based on the content of the course syllabi (N = 4). Additionally, participants were required to participate in all phases of the study: survey, program analysis, and syllabus analysis.
**Data collection procedures.**

*Syllabi.* Participants were subsequently contacted via email and requested an electronic copy of the most recent syllabi of the general music course. A follow-up email was sent to those participants if a course syllabus was not received by the one-week deadline as a second invitation to participate in this phase of the study (N = 17). Each participant subsequently received a letter of consent for the use of “general music methods” course syllabus after participating in the survey. Participants for interviews were selected through criterion sampling based on an analysis of course content to explicitly focus on language arts integration and/or integration with other subjects. Professors/instructors whose syllabus met the following pre-determined criterion:

1. Syllabi used was for music education majors
2. Content supports integration (specifically language arts), and/or
3. Content supports arts integration within other subject areas (as language arts is assumed among the “other subjects” being addressed, and/or
4. Content demonstrates reading intervention assistance through various programs or partnerships.

A total of 12 syllabi were initially received and three instructors responded without submitting syllabi. Six syllabi were disqualified due to the fact that they did not meet the pre-determined criteria of syllabi for a general music method course for the music education major. Of those disqualified, three were for the music course for elementary education majors, one for an integrative course for early childhood majors and two for reading strategies for content areas specifically designed for music education majors. A content analysis was used to examine remaining six syllabi.
Interviews. One 45 minute audio taped telephone interview was conducted with each participating interviewee. Prior to arranging times for each interview, participants received a cover letter via email detailing the purpose and expectations required for participation in the interview. Participants were interviewed using a semi-structured approach consisting of five open ended narrative-based questions. The use of narrative questioning allowed participants to create and expand on the meaning of each response to effectively address the interviewee’s perspective and eliminate any constraints of interviewer bias (Spohn, 2008; White & Epston, 1990). Interviews were transcribed using Words Xpressed Transcription Services (online transcription service that converts audio recordings of the interviews, planning sessions, seminars, etc. into Word documents). Each interview addressed the following topics: reading integration and specific implementation in the general music classroom. Questions focused on: instructors’ philosophical perspective on arts integration, background experience in reading the type of integration taught that enhances language instruction and how the instruction is implemented in the general music methods course.

Data analysis.

Syllabi. Syllabi of general music methods were analyzed using a conceptual content analysis and limited to course descriptions, goals, objectives and other descriptive text as these aspects represent official components of the course in addition to the theoretical and philosophical frameworks guiding the development of the course. Analyses of syllabi examined key words or phrases that suggest theoretical or philosophical direction toward arts integration, specifically language arts. Those syllabi that demonstrated integration were selected for interviews. Additionally, participants
must have participated in all phases of the study; survey, program analysis, syllabi
analysis.

*Interviews.* The data collected from transcribed interviews were analyzed with a
relational content analysis method (Gallagher, Vail, Monda-Amaya, 2008; Strauss &
Corbin, 1998;) and presented through a series of vignettes. Implementing a content
analysis organized similar data into particular themes and interpret the themes in a format
that will be understandable to the reader (Dikici, Yavuzer, & Gundongu, 2008). The
researcher used Strauss and Corbin’s (1998) three steps of data coding to conduct the
content analysis:

1. open coding - according to the pre-determined concepts based on the main
themes addressed in the interview; philosophical standpoint, definition of integration,
implementation of strategies.

2. axial coding - according to concepts obtained from data. Major categories are
paired with subcategories that will provide a more detailed and exact explanation of the
phenomena (Strauss & Corbin, 1998) and

3. selective coding – the process of refining and integrating the discovered
categories.

Overall analysis took place on two levels: the words actually used by the
respondents and the researcher’s conceptualizations of these words (Strauss & Corbin,
1998). To address validity, the researcher will share a summary of the final report with
the research participants who participated in the interviews. Memos and diagrams will
also be taken to demonstrate the analysis process. “Memos are a running log of ideas”;
diagrams are visual analyses of the data (Strauss & Corbin, 1998, p. 153). The researcher will proceed with the following phases; open coding, axial coding and selective coding.

*Open coding (review of data/microanalysis).* This line-by-line process is essential at the beginning of the analysis to discover initial categories and possible relationships among concepts. The researcher has pre-determined the initial concepts to include arts integration, reading, language arts, reading assessments, literacy, and literacy instruction. The line-by-line process will be applied to every word, a sentence or a paragraph (Strauss & Corbin, 1998). The researcher will employ “open-coding” in search of conceptual ideas. These major concepts will then be labeled “phenomena.” Strauss & Corbin (1998) define a “phenomenon” as “a problem, an issue, or a happening that is defined as being significant to respondents” (p. 124). Identifying a phenomenon allows the researcher to “group similar events, happenings, and objects under a common heading or classification […] the fact that they share common characteristics or related meanings enables them to be grouped” (Strauss & Corbin, 1998, p. 103).

The process of conceptualizing involved breaking down the data into discrete parts, incidences, events, acts, etc. in which each part was given a name that represented it. In essence the researcher grouped like pieces with like pieces and extract pieces that are dissimilar. This process opened up new possibilities in viewing data or experiences in a new way that may not have been viewed before (Strauss & Corbin, 1998). The researcher also used field notes to help illustrate the analysis process. This process continued until all possibilities of concepts and labeling are saturated and exhausted. The researcher then reviewed the initial coding system by the following steps

a. looked for possibilities of larger higher order concepts under which the “phenomena” may be categorized,
b. defined properties of each category, the characteristics that give meaning,
c. identified dimensions of each category (if applicable),
d. identified any sub-categories.

Axial coding (relating categories and subcategories). This step began to reconstruct the data that was dissected in the open-coding step and examine the process. It is the step in which researchers look for answers to questions involving why, how come, where, when, how and with what results as derived from the data. Strauss (1987) outlines the step in executing axial coding in which the researcher

a. continued the process of describing the properties of a category begun in open coding
b. identified the various conditions, actions/interactions, and consequences related to a phenomenon.
c. identified the relationship among categories and subcategories through statements indicating the relationship.
d. Recognize any cues gleamed from the data that point to how major categories relate to one another.

“Because linkages among categories can be very subtle and implicit, it helps to have a scheme that can be used to sort out and organize the emerging connections” (Strauss & Corbin, 1998, p. 128). Strauss and Corbin (1998) suggest using the paradigm as an organizational scheme, “a perspective taken toward the data” (p. 128). The paradigm consisted of a phenomenon with labeled conditions.

Selective coding (refining and integrating). The researcher “facilitated identification of the central category and the integration of concepts” (Strauss & Corbin, 1998, 148). Three suggestions exist in implementing this process; writing the storyline, making use of diagrams, reviewing or sorting memos by hand or through computer assistance (Strauss & Corbin, 1998). Once integration was complete, the researcher
refined the theory by looking for internal consistency and gaps in logic. The researcher was guided by the following questions:

- Is the storyline and/or memo clear?
- Is the central category defined?
- Have all the significant properties been identified?
- Are the properties identified built into the paradigm? If not, what is missing?

The researcher then compared the paradigm against the raw data in a high-level comparative analysis. Results validated and explained the “phenomenon” and created a representation of each instructor’s philosophical implementation of language arts content within the general music classroom. See Table 2 for an overview of the research design in alignment with research questions.
<table>
<thead>
<tr>
<th>Phase</th>
<th>Research Questions</th>
<th>Instrument</th>
<th>Subjects</th>
<th>Inferences</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What, if any, reading course is currently included in the music education degree program?</td>
<td>Programs of Study</td>
<td>Identify existence of reading courses included in music education programs. Understand the process in which reading is included in the program courses and who (what department) provided the reading course.</td>
<td>Conceptual content analysis provided a descriptive analysis of reading inclusion within the general music education degree program.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>What are the attitudes and perceptions of professors towards reading instruction</td>
<td>Survey</td>
<td>General Music Course Instructors</td>
<td>From a descriptive overview, glean instructors' perceptions and attitudes towards the inclusion of language arts instruction within the music education degree program and the general music methods course.</td>
<td>Chi-squared analysis determined baseline statistical data of correlations between teacher demographics and questionnaire portions of the survey.</td>
</tr>
<tr>
<td>3</td>
<td>What 'philosophical lens' is used to develop a literacy integrated curriculum for pre-service music teachers and how is it interpreted in practice?</td>
<td>Interview</td>
<td>General Music Course Instructors</td>
<td>Identify philosophies used within using music to enhance reading (language arts) skills.</td>
<td>Relational content analysis and interviews provided themes and categories that represent a pictorial view of music and reading integration with recommendations for course descriptions and content that effectively uses music to enhance reading skills.</td>
</tr>
<tr>
<td></td>
<td>What content and experiences are included within general music course that addresses literacy and how is it implemented?</td>
<td>Course Syllabi/General Music Course Instructors</td>
<td>Identify the characteristics of language arts reading integration within the general music methods course.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 4

Results

Purpose of Study

The purpose of this study was to investigate how National Association of Schools of Music (NASM) accredited colleges/universities prepare pre-service music teachers to include reading/language arts into the elementary music classroom. A quantitative descriptive research design was implemented in three phases: conceptual analysis of degree program’s curricula, survey, and interviews. A conceptual analysis of the NASM accredited music education degree programs was used to examine the existence of reading content courses within music education degree programs and distinguish which department (Music or College of Education) the courses are provided.

A cross-sectional survey was used to provide a “descriptive” analysis of instructors’ attitudes and perception toward reading/language arts integration within the general music methods course (or course equivalent). Chi-squared analysis determined correlations between teacher demographics and questionnaire portions of the survey. Interviews of selected instructors were conducted to further detail how reading content is introduced and integrated within the coursework of the general music methods course (or course equivalent), a course that is required by the NASM for music teacher certification. This chapter will present data collected for each phase of the study.

Demographic Information

University/college demographics. The target population comprised of four-year baccalaureate universities identified as NASM accredited public and private universities from the top 100 largest cities in the United States offering a Bachelor’s degree in Music
with an emphasis in music education (N = 100). Fifty-four percent of degree programs were from four-year public institutions and 46% were from four-year private institutions. Twenty-four schools offered Bachelor’s degrees in Music Education, 54 offered Bachelor of Music in Music Education, 9 offered Bachelor of Science in Music Education, seven offered a Bachelor of Arts in Music Education, 2 offered Bachelor of Music with teacher certification, 2 offered Bachelor of Education in Music, 1 offered Bachelor of Fine Arts in Music Education and one offered Bachelor of Arts in Music Education. Those universities that offered Bachelor of Music with teacher certification had a specific curriculum leading toward teacher certification within the four-year program.

**Instructor demographics.** Frequency distributions were calculated for data collected from survey questions 1 through 5, indicating position, area of specialization, public/private school teaching experience, numbers of years teaching and experience in reading instruction (see Table 3). Position distribution indicated 40 (88.9%) were faculty, 3 (6.7%) were adjunct faculty currently teaching in a public/private school, 1 (2.2%) was adjunct faculty not currently teaching, 1 (2.2%) indicated other, stating “half-time faculty, half-time department chair.”
Table 3

*Frequency Distribution of Demographic Information (Position)*

<table>
<thead>
<tr>
<th>Position</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>40 (88.9)</td>
</tr>
<tr>
<td>Adjunct Faculty (currently teaching in a public/private school)</td>
<td>3 (6.7)</td>
</tr>
<tr>
<td>Adjunct Faculty (not currently teaching in a public/private school)</td>
<td>1 (2.2)</td>
</tr>
<tr>
<td>Graduate Assistant</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (2.2)</td>
</tr>
</tbody>
</table>

Area of specialization responses indicated that 35 (77.8%) of responders were in elementary (general music), 8 (17.8%) band, 13 (28.9%) choral, 2 (4.4%) strings and 13 (28.9%) other. Specializations under “other” included a band director, three general music (middle/high), early childhood/research, coordinator of music education, music education/music theory/orchestra, computers and music, voice, technology integration, music integration in the classroom, research methods, director of music methods, student teacher supervisor, higher education and special music education (see Table 4).
Table 4

*Frequency Distribution of Demographic Information (Specialization)*

<table>
<thead>
<tr>
<th>Area of Specialization</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary (General Music)</td>
<td>35 (77.5)</td>
</tr>
<tr>
<td>Band</td>
<td>8 (17.8)</td>
</tr>
<tr>
<td>Choral</td>
<td>13 (28.9)</td>
</tr>
<tr>
<td>Strings</td>
<td>2 (4.4)</td>
</tr>
<tr>
<td>Other</td>
<td>13 (28.9)</td>
</tr>
</tbody>
</table>

Public/private school grade level teaching experiences revealed 39 (86.7%) have taught either elementary (K-5), 34 (75.6%) middle school (6-8), 21 (46.7%) or high school (9-12). Seventeen (37.8%) indicated other grade level teaching experience including 4 who taught in early childhood/preschool and 2 in special education music (see Table 5).

Table 5

*Frequency Distribution of Demographic Information (Grade Level)*

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary (K-5)</td>
<td>39 (86.7)</td>
</tr>
<tr>
<td>Middle School (6-8)</td>
<td>34 (75.6)</td>
</tr>
<tr>
<td>High School (9-12)</td>
<td>21 (46.7)</td>
</tr>
<tr>
<td>Other</td>
<td>17 (37.8)</td>
</tr>
</tbody>
</table>
Analysis of total teaching experience among the population revealed a majority of instructors (53.5%) had 21 or more years of teaching experience. Thirteen percent (13.3%) had between 16 and 20 years, 5 (13.3%) had between 11 and 15 years, and 3 (6.7%) had between zero and five years of teaching experience as shown in Table 6.

Table 6

*Frequency Distribution of Demographic Information (Years Taught)*

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>3 (6.75)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>7 (15.6)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>5 (11.1)</td>
</tr>
<tr>
<td>16-20 years</td>
<td>6 (13.3)</td>
</tr>
<tr>
<td>21 or more years</td>
<td>24 (53.3)</td>
</tr>
</tbody>
</table>

With regards to background and experience in reading instruction, 48.9% participated in professional development, 46.7% conference/workshops, and 28.9% college reading courses. Thirty-five percent had no previous background or experience in reading instruction as shown in Table 7.
Table 7

Frequency Distribution of Demographic Information (Background Reading Experience)

<table>
<thead>
<tr>
<th>Experience in Reading Instruction (Language Arts)</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional development</td>
<td>22 (48.9)</td>
</tr>
<tr>
<td>Conference/Workshop</td>
<td>21 (46.7)</td>
</tr>
<tr>
<td>College reading course</td>
<td>13 (28.9)</td>
</tr>
<tr>
<td>No previous experience</td>
<td>16 (35.6)</td>
</tr>
</tbody>
</table>

Research Question 1

What, if any, reading course is currently included in the undergraduate music education degree program? Upon analysis of degree programs, results indicated that more than half the universities/colleges examined included a reading course as a component of the music education degree program. This particular course was mainly offered through the College of Education and based on an analysis of course titles ranged in content from reading within interdisciplinary curricula to reading as a separate subject.

Inclusion in the Music Education Program

Of the 100 universities/colleges investigated, 53 music education degree programs included a literacy/reading course as a requirement for the degree (see Table 8). Fifty-one programs offered at least 1 course; one program offered 2 and one program offered 4 courses. A majority of the courses (92%) were required through the College of Education. Three courses (6%) were required by the Music Department/School/College. One course (1%) was required through General Studies or core requirements and one
course was required through a separate college that worked in conjunction with the university/college to provide a certification. One course was identified as state mandated.

Of the universities/colleges that required the reading course, 1 was located in Region I, 4 were located in Region III, 10 were located in Region IV, 14 were located in Region V, 13 were located in Region VI, 7 were located in Region VII, 1 was located in Region VIII, and 3 were located in Region IX. No courses were offered in Regions I and X. The universities/colleges that offered multiple courses were both located in Region IX (see Figure 6).

Figure 6. Organization of the 10 Equal Assistance Centers (Ten regions). Source: www2.ed.gov/programs/equitycenters/civilrightsact.doc
Table 8

*Distribution of music education programs by U.S. Equity Assistance Centers*

<table>
<thead>
<tr>
<th>Region</th>
<th>States Represented</th>
<th>Total Schools</th>
<th>Universities/Colleges <em>with</em> required reading course</th>
<th>Universities/Colleges <em>with</em> no required reading course</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Connecticut</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Massachusetts</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Maine</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>New Hampshire</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Rhode Island</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Vermont</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>New Jersey</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>New York</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Delaware</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Maryland</td>
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<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Pennsylvania</td>
<td>2</td>
<td>0</td>
<td>2</td>
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<tr>
<td></td>
<td>Virginia</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Washington, DC</td>
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<td>1</td>
<td>1</td>
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<td></td>
<td>West Virginia</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Alabama</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Florida</td>
<td>7</td>
<td>6</td>
<td>1</td>
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<tr>
<td></td>
<td>Georgia</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Kentucky</td>
<td>2</td>
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<td>2</td>
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<td></td>
<td>Mississippi</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>North Carolina</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<td></td>
<td>South Carolina</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td></td>
<td>Tennessee</td>
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<td>6</td>
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<tr>
<td>5</td>
<td>Illinois</td>
<td>6</td>
<td>2</td>
<td>4</td>
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<tr>
<td></td>
<td>Indiana</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
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<td></td>
<td>Minnesota</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Ohio</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Wisconsin</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Arkansas</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
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<td></td>
<td>Louisiana</td>
<td>6</td>
<td>5</td>
<td>1</td>
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<tr>
<td></td>
<td>New Mexico</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Oklahoma</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Texas</td>
<td>8</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Kansas</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
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<td></td>
<td>Iowa</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
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<td>Missouri</td>
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<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Nebraska</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

(continued)
Table 8

*Distribution of music education programs by U.S. Equity Assistance Centers*

<table>
<thead>
<tr>
<th>Region</th>
<th>States Represented</th>
<th>Total Schools</th>
<th>Universities/Colleges with required reading course</th>
<th>Universities/Colleges with no required reading course</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Colorado</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
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<td>1</td>
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<td>2</td>
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<td>0</td>
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<td>1</td>
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<td>0</td>
<td>1</td>
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<tr>
<td></td>
<td>Idaho</td>
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<td>-</td>
<td>-</td>
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<tr>
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<td>0</td>
<td>1</td>
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<td></td>
<td>Washington</td>
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<td>Total:</td>
<td>100</td>
<td>53</td>
<td>47</td>
</tr>
</tbody>
</table>

**Reading Course Function**

From the second round of coding and analysis, eight course descriptions emerged from the data and were labeled with the following titles: (1) content area reading, (2) reading in the content area, (3) teaching reading, (4) grade specific, (5) reading and writing, (6) reading only, (7) reading and writing instruction, and (8) acquiring reading skills. Each course was assigned to a coded description which, after content analysis, the researcher perceived to be the focus of the course. Code descriptions and tally of courses assigned to each code are provided in Table 9. Three courses were coded with two numbers because the title of the course fit into two distinct categories; Secondary content area literacy was assigned both (4, 5); Teaching Reading in the Secondary School Content Area was assigned (3, 4); and Teaching Reading in the Music Classroom, (2, 3).
Two courses could not be coded due to the vagueness and ambiguity of the titles (Music and Language and State Mandated Reading Course). Three courses explicitly referred to music within the title and were assigned the following codes: Music and Language (0), Teaching Reading in the Music Content Area (2, 3) and Teaching Reading in the Music Classroom (3).

Table 9

*Code descriptions and tally of reading courses that match the descriptions.*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description (implied by researcher)</th>
<th>Number of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Content Area Reading-specific to the discipline, how reading is used within the discipline</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Reading in the Content Area- use of reading skills within the subject discipline</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Teaching Reading- intent to specifically teach progression of acquiring reading, strategies, techniques and assessment</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Grade specific- focus is use of reading at the secondary level</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Reading and Writing- shared course framework of both reading and writing cross disciplines, comprehensive inclusion of reading and writing (literacy)</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Reading Only- focus on reading method and materials</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Reading and Writing Instruction- interdisciplinary approach across disciplines</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Acquiring Reading Skills- teach progression of acquiring reading and writing skills</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td>53</td>
</tr>
</tbody>
</table>
Research question 2. What are the perceptions and attitudes of reading integration in NASM accredited public and private colleges/university music teacher preparation programs? Analysis of survey responses revealed that music instructors perceived it favorable for reading integration to be included in elementary music classrooms, however there were mixed feelings towards whether or not music education teacher training programs should be structured to prepare pre-service music students to support basic reading instruction in the music classroom.

There were 10 questions pertaining to the instructor’s current philosophy, perceptions and attitudes regarding reading/language arts inclusion in the general music classroom (see Table 9). There was an initial response rate of 45% however, while 45 participants began the survey, only 42 completed the survey in its entirety (excluding the request for further information section), which adjusted the true response rate to 42%.

Almost three-fourths (73.8%) of the participants believed there is a national reading crisis. Most of the participants (83.3%) believed it was important that pre-service teachers are knowledgeable about reading instruction issues/concerns that affect school curricula and (78.5%) believed their college/university prepares pre-service teachers in this regard. A great majority (92.8) believed music instruction has the capacity to be used to serve as a support for other academic subjects, however only 64.2% believed that content from other academic subjects (e.g., math, science, language arts, social studies, etc.) should be included within music instruction. Adversely, 73.8% believed reading content should be included in general music classrooms and 74.4% believed pre-service music teachers should be knowledgeable in basic reading content. Fifty-four percent believed music education teacher training programs should be structured to prepare pre-
service music students to support basic reading instruction in the music classroom. More than half (59.5%) felt confident instructing pre-service music teachers on the process of reading integration in the general music course (or course equivalent), however 73.8% demonstrate reading integrated experiences in the general music course (or course equivalent).

Table 10

*Frequency Distribution of Survey Responses*

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Disagree</td>
</tr>
<tr>
<td>Q1: I believe that there is a national reading-crisis.</td>
<td>2 (4.7)</td>
</tr>
<tr>
<td>Q2: I believe it is important that pre-service teachers are knowledgeable about reading instruction issues/concerns that affect school curricula.</td>
<td>2 (4.7)</td>
</tr>
<tr>
<td>Q3: I believe the degree program at this college/university prepares pre-service teachers to be knowledgeable about reading instruction issues/concerns that affect school curricula.</td>
<td>1 (2.3)</td>
</tr>
<tr>
<td>Q4: I believe music instruction has the capacity to be used to serve as a support for other academic subjects.</td>
<td>1 (2.3)</td>
</tr>
<tr>
<td>Q5: I believe music instruction should include content of other academic subjects (e.g. math, science, language arts, social studies, etc.).</td>
<td>6 (14.2)</td>
</tr>
</tbody>
</table>

(continued)
Table 10

Frequency Distribution of Survey Responses

<table>
<thead>
<tr>
<th>Question</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6: I believe reading content should be included in general music classrooms.</td>
<td>6 (14.2)</td>
<td>5 (11.9)</td>
<td>31 (73.8)</td>
</tr>
<tr>
<td>Q7: I believe music education teacher training programs should be structured to prepare pre-service music students to support basic reading instruction in the music classroom.</td>
<td>11 (26.1)</td>
<td>8 (19.0)</td>
<td>23 (54.7)</td>
</tr>
<tr>
<td>Q8: I believe pre-service music teachers should be knowledgeable in basic reading content</td>
<td>2 (4.7)</td>
<td>10 (3.8)</td>
<td>30 (71.4)</td>
</tr>
<tr>
<td>Q9: I feel confident teaching pre-service teachers the process of reading integration in the general music course (or course equivalent).</td>
<td>9 (21.4)</td>
<td>8 (19.0)</td>
<td>25 (59.5)</td>
</tr>
<tr>
<td>Q10: I demonstrate reading integrated experiences in the general music course (or course equivalent).</td>
<td>7 (16.6)</td>
<td>4 (9.5)</td>
<td>31 (73.8)</td>
</tr>
</tbody>
</table>

Demographic information was cross-tabulated with survey questions to determine if relationships exist between specific demographic information (teaching experience, specialization, background knowledge in reading, etc.) and perceptions and attitudes toward reading integration. Two survey variables were significant when cross tabulated with demographic information (see Table 10). When asked if instructors believed their university prepares music education students in reading instruction, significant differences were found among specialization areas. Seventy-five percent of elementary
specialists, 88% of band, and 82% of choral specialists agreed in the belief compared to only 50% of string specialists ($X^2[8, N = 67] = 35.09, p < 0.001$. Instructors (59.5%) who felt confident instructing pre-service teachers the process of integration, were significantly more likely to have some background knowledge and/or experience in reading instruction ($X^2[6, N = 68] = 33.67, p < 0.001$).

Table 11

*Statistically significant chi-square analyses showing the relationships between inclusion of reading integration and demographic variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Demographic</th>
<th>$n$</th>
<th>$X^2$</th>
<th>df</th>
<th>$p$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>University prepares pre-service teachers to be knowledgeable about reading instruction.</td>
<td>Specialization</td>
<td>67</td>
<td>35.09</td>
<td>8</td>
<td>.001</td>
</tr>
<tr>
<td>I feel confident teaching pre-service teachers reading integration in the general music methods course.</td>
<td>Experience Reading Instruction</td>
<td>68</td>
<td>33.37</td>
<td>6</td>
<td>.001</td>
</tr>
</tbody>
</table>

*p < .05.

**Research question 3.** What “philosophical lens” is used to develop a reading and music integrated curriculum for pre-service teachers and how is it interpreted in practice? Results revealed that instructors varied in their philosophical approach toward reading integration in the music classroom. The three instructors interviewed were guided by one of the following philosophies; Holistic Learning, Comprehensive Musicianship and Sound Ways of Knowing. It is the integrative approach these
philosophies possess that the instructors demonstrate and model for the pre-service music teacher. In practice, the philosophical lens interpreted reading integration where reading is seen, understood, and utilized through the context of musical understanding and only applied when and if there is a natural fit.

Comprehensive Musicianship

Comprehensive musicianship is the interdisciplinary study of music. This approach integrates the various areas of music (e.g., music history, music literature, music theory, music performance, music pedagogy) into a unified whole (MENC, 1965). “By relating and integrating the various areas of music, integration allows for a logical and meaningful learning experience” (Heavner, 2005, p. 170). A set of beliefs promoted by the Contemporary Music Project (CMP), the philosophy of comprehensive musicianship suggests that all music students should have the opportunity to relate all aspects of their music education to the total world of music (Boyle & Radocy, 1973).

Holistic Learning

Holistic learning views teaching and learning through an integrative approach. Its approach is based on innovation and use of multiple strategies. Shuy (1981) defines the term holistic as having various meanings regarding learning. He describes how some refer “to the whole rather than the part”, others suggesting it is the “the analytic perspective and the constructivist notion that social context must be included in any understanding of behavior and thought” and finally how many see holistic as a “kind of subjective or unprincipled overview of a set of data without making the rules explicit” (p. 102-103).
Sound Ways of Knowing

Ways of Knowing is a philosophical approach based on the understanding that people come to knowledge through multiple pathways. It is a philosophy that is based from the Theory of Knowledge which critically examines what knowledge is and how it is acquired. One primary question from this philosophy is to distinguish the different senses of the meaning ‘to know’. Lehrer identifies three senses “one sense, ‘to know’ means to have some special form of competence […]. Another sense of ‘know’ means to be acquainted with something or someone […]. The third sense of ‘know’ is that in which ‘to know’ means to recognize something as true” (pp. 4-5). Ways of Knowing allows students to come to knowledge through natural processes and activities. Sound Ways of Knowing is an interdisciplinary approach to music knowledge in order to strengthen the relationships between music and other curricular disciplines through the context of music history and culture (Barrett, Veblen & McCoy, 1997).

Research question 4. What content and experiences are included within the general music course that addresses reading and how is it implemented? After analyzing and coding interviews, significant themes that emerged from the data included the use of: (1) reading terminology that was embedded in the course, (2) use of reading strategies to assess music understanding and (3) modeling how integrative strategies are implemented.

Three participants were selected for vignettes based on the philosophical and theoretical position regarding music and reading integration. All instructors interviewed had experience in collaborative meetings with other educators and could attest firsthand to how those experiences helped to better integrative practices within their own teaching.
Instructors also had some background knowledge in reading content (phonemic awareness, phonics, sequencing, decoding, and comprehension) and approached integration as both content and a process. Results indicated that instructor modeling involved the teacher providing students with a clear example of how reading processes skills are reflected in music. Integrative strategies were modeled to pre-service students who then practiced the strategies through assignments. Table 12 indicates additional themes that emerged from the data. The vignettes summarize the interviews highlighting reading integrative strategies implemented within the general music course (or course equivalent).

**Vignette 1**

Middle University is located in the Midwest region of the United States and identifies itself as the only urban-serving research university in the state, a state where, in 2007, the average reading scores for fourth and eighth grade students were higher than the national average. Twenty-eight percent of fourth grade students and 33% of eighth grade students were proficient or higher reading level and of the adult population 16 and older, only 8% lack basic prose literacy skills as determined by a 2003 national assessment.

This four year, coeducational institution contains a diverse student population of approximately 15,000 and prides itself on its urban location and on the broad range of education programs and opportunities for student growth, both personally and professionally. The music department offers a degree in music education with an emphasis on special education. This unique dual emphasis component was developed by a professor who had a strong connection with the Communicative Disorders and Sciences
and with this experience and background in special education believed in offering every child an opportunity for musical growth experiences. Consequently, the overarching philosophy of the program sees music as a “vitaly important medium for those students who do not speak or who have other exceptionalities. If a child can understand through music the concepts of long and short sounds, duration, loud and soft, high and low, pitch and rhythm patterns, he can transfer that knowledge to other areas.”

The curriculum is comprised of five components: general education, music general education, music education, teacher education, and practical experiences. In addition to coursework, students are provided an ample variety of opportunities for hands-on experience, interaction with students with and without disabilities and access to in-service teachers who share words of wisdom. The program encourages participation in a variety of activities that will foster and expand their connections by viewing and understanding the field through memberships in professional organizations and participation in conferences and workshops.

Part of the education requirement includes a reading specific course originally offered through the college of education. However, Professor Harris (pseudonym) restructured the course to focus on infusing reading content within the music curricula.

Professor Harris enjoys teaching her course, which includes general music methods and a reading course specifically designed to provide pre-service music teachers reading content and how to use the literacy reading within the elementary music classroom. She has two degrees in music with an emphasis in special education and a minor in speech pathology.
Her arrival to the music and literacy connection did not develop through a reading background but through language and literacy. What sparked her interest was her observation which concluded that the discussion of literacy deficiencies extends beyond just reading and affects literacy modes that use coding and decoding strategies (i.e., music).

“Any child having problems with abstract learning and symbol systems may have difficulties with music,” she says “But in reality sometimes those kids will do better in music than they do with written language because music has that visual component. Like when the sounds go up, the note head goes up and when the sounds go down the note heads go down...and if the notation is written well you can also see the timing elements. Music teachers are reading teachers. Music teachers teach children how to decode sound, which is a main component of reading literacy. Because we teach them to decode sound and put it in a symbol system that makes us reading teachers.”

However she is careful to point out that the use of literacy and music integration must be implemented with a “simultaneous” approach, meaning the language literacy ought to be directly related to the language use in songs rather than an artificial connection in which music teachers are asked to specifically teach reading, exclusively.

As she introduces the concept of integration to her pre-service teachers, she begins by presenting it in two levels. First she explains and clarifies the “natural” integration that occurs between music and reading as one level. “Most of the music we use in schools is a reflection of language and vice versa,” she stated. “Language reflects the music. This therefore demonstrates a natural integration process.”
Next, she introduces the second level which details the process of both decoding and comprehension separately. She really takes them through the different components of decoding including phonological awareness, phonemic awareness and sight identification etc. so that they understood what the terms mean to English and Language Arts teachers.

“But most importantly I want them to see how these concepts are reflected in music,” she stated.

During one class, she had students listen to a piece of music during which the students identified music concepts that were important and what might be the objectives of the music. Then they studied a children’s book for phonological and phonemic aspects such as rhyming words. Next, the students examined at how the book was structured and asked the following questions: Do the illustrations match the particular vocabulary? Is the text written bigger or smaller? From there, the students created a music activity to accompany the book by finding or creating time repetitions, time or pitch patterns or where timbres were added. They were able to add instruments for the reading of the book. Students could also make ostinati out of some of the repeated patterns in the book. This taught them that how to transform a standard book, like a Dr. Seuss, into an activity that becomes musical. “My purpose in this particular coding exercise” she explains “is for my students to go back and forth between music and text so that they can see what they are decoding in language and what they are decoding in music.”

For comprehension, however, Professor Harris introduces the concept as having two aspects: big ideas and broader ideas. “Most of the songs and most of the music that we do with young people demonstrate comprehension in different ways,” she clarified.
“They’re either about a story, about some kind of other theme or it might be a story with a beginning, middle and ending.”

She also clarified that the story may be about a theme like animals or some other category. “Songs can also be historical in nature, be about people or tells what happened in time,” she goes on to say. “Therefore, you want to look at what it is that we want the child to comprehend when they do that book? Well, we do the same thing in music. What is it we want them to comprehend when they sing this song? Meaning, a lot of the comprehension piece on the language side is the same and even goes further in music. We want students to ask themselves, historically, what’s it like? What’s its style? Is it baroque? Is it classical? Is it folk? Is it western? If it is folk music, is it more of a European type, or is it more of the Hispanic type? What time period is it from? Those are all comprehensive aspects.”

With all these strategies and practices, Professor Harris classifies herself as one whose philosophy is built on comprehensive musicianship. But what drives her unique approach to integration is her desire for her students to implement best practices that are developmentally appropriate. She clearly denotes that this strategy is not a philosophy but makes it undeniably clear that teachers must look at students and give them the best thing that can be given to them for where they are developmentally.

So how did she gather all this information? Where did all these ideas and reading connections have their birth in her teaching? Although Professor Harris acknowledges her background in speech pathology, she attributes part of her reading knowledge through her experience as a teacher and through collaboration with colleagues who taught other subjects. “I traveled around and taught music to special needs children. And the thing
that was interesting was I taught in their regular classrooms,” she said. “I was exposed to the activities they were doing. They would be finishing up a language lesson right when I got there, or whatever. And most of the time, the teachers, because of the kids being special needs kids, most of the time the teachers would be in the classrooms while I was teaching music. Even if they weren’t actually doing it with me, they were in the room. And a lot of times, they would then say, ‘Oh, my gosh, you are doing … whatever.’ And they would keep pointing out what I was doing that was an integration piece like question/answer or colors and animals, etc. But, they also would point out language structures and things that we were doing like ‘lining.’ And so, a lot of it ended up being that the more that I was doing, and the more that they liked what I was doing, and the fact that kids were responding to it, we would actually begin to co-plan together. So, we would actually plan integrated lessons. And I would sometimes ask them, ‘Now, what units are there? Is there a scene that you’re going to be doing?’ And, of course, we did the typical ones, like seasons, and you know, animals, and activities, transportation, all those kinds of things.”

So her position regarding music teachers when faced with integrating reading is to allow them to do what they do best, which is work with sound and code systems, which in turn helps with reading. Reinforcing a concept the exact same way as a classroom teacher, is not going to get the job done. Her support for reading integration in music is best said through an analogy. “If everybody’s painting the fence, then we’re going to get the fence painted,” she said wistfully. “But, if everybody who is painting the fence has exactly the same width of brush and they’re actually only supposed to go over the exact same stroke that somebody else made, that’s not going to get the job done. What gets the
job done is that if each person uses the tool that they use best, and they learn how to do overlapping, that’s when you get everything done, because what I know and what I do overlaps with what you do, but you do some stuff that I don’t do.”

Vignette 2

Metro City University is located in the upper Midwest in a metropolitan city that is surrounded by three rivers. According to the residents, the city is considered a capital for the arts. Based on the 2007 National Report Card assessed by the National Center for Education Statistics, reading scores for both fourth and eighth grade students were higher than the national public schools and in the last national reading assessment recorded in 2003, 6% of the adult population lacked Basic prose literacy skills.

Metro City University is the state’s flagship university with a mission to inspire students to pursue breakthrough discoveries, and share knowledge locally, nationally and globally. Their School of Music boosts an enrollment of 550 graduate and undergraduate students and offers bachelor, master and doctoral degrees in music education. The bachelor of music degree in music education offers concentrations in either choral/general or instrumental/general music. Included as a requirement for all music education majors, regardless of specialization, is a reading in the content course offered through the College of Education. Professor Hyde (pseudonym) is one of the music education faculty members who teaches a course in general music. Her course is based on the internationalized approach. Topics addressed include integration and synthesis of interdisciplinary and international information. She has no particular philosophy that she aligns with regarding integration; however, she discusses the perspective of the African philosophy of knowing as that we learn from the whole.
Professor Hyde’s definition of integration is two-fold. It is a separate entity in its own with a breadth of knowledge in and of itself as well as a process for which learning takes place. This definition is clearly stated in her syllabus as being the procedure of arts learning where themes, either topical or conceptual, are addressed from unique, disciplinary and complementary perspectives. She attributes her natural ability to integrate to her Ghanaian background. “In Ghana,” she stated “most often the arts were expressed as integrative so for me it was more how do I integrate with language arts. Because for use, poetry and language is the way we used to sing a song. When you sing a song you have to bring out the meaning of the song. In our own expression, we usually don’t separate those things.”

As she prepared to teach her African music class, she desired to figure out a way for her students to comprehend African music at a much deeper level so they could see the beauty of the music. In her personal research, she came across several texts on the topic of arts integration—*Arts as Meaning Makers* and *Sound Ways of Knowing*. Soon she found herself participating in the implementation of an arts integration summer seminar for educators across that state. This experience is where she gathered more in-depth information and broadened her knowledge on integration. She was immersed in the collaborative experiences in action. This natural immersion of music and reading is what she demonstrates to her undergraduate students. Reading content is embedded into the course and the use of reading terminology is inseparable from music terminology. Students become aware that language is music so it is almost unavoidable to talk about music content without addressing language. One assignment involves creating chants. “We look at words in chants and other elements in chants, their phonemes, things to do
with phonics, their vocabulary, and things like that. I teach them about how to understand and how to create and demonstrate in a study of language and rhythm.” she quickly describes.

The process that she goes through with her students helps them to be able to do the same process with their students. “If they want to be able to teach these chants to children they should be able to go through the words. They should be able to sound the words, the smallest units, the phonemes. They should be able to put letters together to create a whole word and then they should be able to demonstrate that they understand the meaning of the word. And then if they say the chant over and over again, they create fluency,” she said insistently.

This is the first of many projects that involve the correlations between music and reading as well as text comprehension, sequencing, and phrasing that Professor Hydes requires of her students. She provides examples of each and demonstrates how her students make the reading connection. Her repertoire of projects focuses on text in song because in singing, reading issues have to be addressed. Students are required to analyze a song for both language and music issues that may arise before they teach it. Also, students address comprehension regarding text and how they would demonstrate the meaning of words to help children understand. Another example is a listening project that makes use of children’s literature. Here, students chose a piece of music for a listening activity for children and are encouraged to connect it to a storybook. “As a literature advocate, I ask them to bring a bucket of books to class and I always want my student to connect some children’s literature to the music,” she said. “That way the children are reading the literature and making connections between the story line and the
sequencing in the story. Then they make connections to music and the fact that in music there’s also a sequence in performance, whether it’s going to be in rounded or sonata form. There are also phrases in both music and stories and there are sections that repeat themselves. There are also new ideas in a story in the same way there are new ideas in music.”

Professor Hyde’s music and reading integration approach has become such a natural occurrence in her general music course. The boundaries of each subject seem to have dissolved. “When we talk about text in a song,” she explains, “I would mention a reading literacy concept like phrasing or syllables. But I don’t make a deliberate thing about it. It’s so integrated for me that I don’t know whether the students actually stop to think about it as a reading thing because they’re always decoding. They’re always making sense of what the text is.”

Professor Hyde admits integration is a part of who she is. It is inseparable because it was how she was brought up as a musician. “I’m not opposed to integration,” she clarifies. “However, I am aware that I’m a music teacher first and so I don’t make it overtake everything I do. But it’s part of who I am. I think when people get uncomfortable with the whole idea of integration they feel that it’s another thing that is being added to the music curriculum. However, in general music, reading is taught in the music curriculum because you cannot get away from language arts when you’re doing general music. It’s part of the way you put things together.”

She also sees how implementing reading and music integration has become effortless for her students. She recalls visiting Sara, a student teacher, and witnessing how the student was integrating naturally. While teaching the song
Supercalifragilisticexpialidocious, Sara focused immediately on the individual words instead of the syllables and before she could even get to that point in the lesson, one of the children commented “Oh, there’s so many syllables” and had already counted them. The lesson had transitioned from syllables, to rhythm, to the discussion about rhythm in language. “You’re not stopping to say ‘okay so now we’re dealing with phonics,’” Professor Hyde reiterates, “but the kids are thinking about it, critically thinking about it. When they see a word on the board and then they’re sounding the word, they’re clapping the syllables and then they’re coming up with a rhythmic idea in terms of the syllables and they did it naturally. It was wonderful, and so they do it naturally because it’s part of what we do in general music.”

**Vignette 3**

Northeast University is located in the capital of a state in the Northeastern region of the United States. As recorded in the 2007 National Report Card, reading scores for both fourth and eighth grade students in the state were higher than the national average. Six percent of the adult population lacked *Basic* prose literacy skills as assessed by the National Center for Educational Progress in 2003.

Professor Hammel (pseudonym) is the graduate music education faculty member at ABC Performing Arts Conservatory located on the Eastern coast where music education students are immersed in hands-on practical training and graduate with years of teaching experience with children from surrounding community and area schools. The Bachelor of Music in Music education degree with emphasis on either voice or instrumental study prepares students to teach at both elementary and secondary levels. As a requirement of the program, students must take a reading course offered through the
College of Education, however Professor Hammel teaches the course so that it specifically accommodates reading integration for the pre-service music educator.

Professor Hammel’s definition of integration is defined by several sources from the work of both Robert Fogerty and Janet Barrett but she first identifies to her students that there are different ways to integrate. “There are ways to serve one curriculum area in which you integrate various aspects of that particular subject area into -- and teach it rather thematically. Or there are ways to integrate where you have teachers from different disciplines that actually plan together to create somewhat of an integrated unit” she explains.

Ultimately she takes the various aspects of these approaches and teaches the integration process in a way that actually looks at borrowing some of the instructional strategy particularly from the language arts area and uses those approaches as a way to integrate instructional strategies into music education. Her specific approach to integration is to make sure that the music that is taught is taught with integrity toward music as the discipline and not as a secondary subject area. Whatever is integrated, the content of music must be true to the foundational aspect, either historical or theoretical, of music education and be strong in its intent.

Her introduction to reading integration is deep rooted in her teaching and supervising experience. “What really got me started was the extensive, intensive training and teaching techniques that came from many other curriculum areas and introducing those to music and the arts, particularly teachers across the state as my role as a fine arts supervisor.” She describes her journey and connection in great detail. “I was in the State Department of Education for eight years and I was a fine arts supervisor there. My job in
going in was to have 60% of my time spent with school improvement issues and 40% of my time spent with fine arts, which I didn't really do. I really felt very strongly that I could incorporate the fine arts as part of my school improvement work, which is exactly what I did. I worked very closely with science specialists, the math specialists, the reading specialists and social studies specialists. We all worked together on a team and we learned together. That was in the time when we were developing national standards in the arts in all curriculum areas. It was the time of Goals 2000 when we began thinking about school improvement in terms of what kids were doing rather than physical aspects of how many library books are in the library and things like that. And it was a time when we were learning about each other's curriculum area in a very deep sort of way.” She goes on to say, “We had a lot of professional development in which I attended and learned specific strategies for teaching reading, and mathematics, and science. And my colleagues actually attended my workshops as well. So we all learned from each other. It was a part of that job that we were all assigned to many, many schools and school districts. I had over one hundred schools and at that time our responsibility was to take the school improvement plans and evaluate them and to follow that school through its five-year process in school improvement, looking at continuous improvement throughout. So we not only looked at their curriculum in the particular district, but actually what was happening in the classrooms. We looked at triangulated data that came from each of the schools and school districts regarding the students in their classes and we were also responsible for helping our schools have a greater understanding of instructional strategies that were research based, that would actually improve student learning. So again, I was working very closely with all of my colleagues in other content areas and I
found that many of the things, particularly in the reading and science areas, were extremely transferable to our arts classrooms.”

In addition, her district had a statewide goal of problem solving, which transferred beautifully in the arts. “At that point in time, those types of instructional strategies were required of all of the teachers in the state regardless of what they taught. So I had to get pretty good at it to be able to teach all of my arts folks across the state.”

What she noticed, however, was that when implemented effectively, integration helped those teachers improve their instruction. It made them better teachers and they knew it. “So that's really what prompted my interest in all of this because over the years, I began to see that they really became better teachers in terms of understanding the content of what music was all about. They did a great job of teaching how to play, but teaching what music was all about was so beneficial through these other instructional strategies,” she remarked.

Her strategies with regards to reading integration include writing in the classroom and using inquiry types of strategies used by reading teachers, such as cooperative learning, etc.

With her college students, she first starts the process of reading integration by reviewing brain research. She spends several class periods discussing the various learning areas of the brain, the physiological process that occurs as people go through life and the developmental process that takes place. “I use this as a foundation and find myself referring back to that information to make the connections and tell them ‘we do these things because [...]’. These types of [music] activities that you do are reinforcing’ I tell them” she describes.
Reinforcement is enormously important. She then further describes the brain properties of auditory and visual processes and their relationship to decoding skills. She begins with reading language and identifies the terminology used by reading teachers, reading specialists or other professionals who work with children with learning disabilities and reading disabilities. One of her classes is currently completing the first round of understanding the sonological and phonemic awareness skills, and the subcategories of auditory discrimination and association skills that are attributed to children’s ability to read. Then she makes the transfer into music education and examines how music teachers look at the same skills in an auditory and language sense as the reading teacher. She also spends a great amount of time on fluency and the upcoming research looking at the idea of prosody, the development of pitch, and stress, and juncture, and how they all play into the ability to comprehend text and comprehend language and make the transfer into music.

“We talk quite a bit about how we teach prosody and fluency, and that it is actually defined through language arts. And then we look at what we do in the music classroom to actually teach that” she says. Her students then create musical mini-lessons in which they have to identify what reading process is being taught through the lesson.

For the second half of the semester, Professor Hammel discusses comprehension and uses the instructional strategies. Finally she returns to brain research and revisits the physiological effects of what occurs and reminds them that music and reading are both essentially based on auditory and oral skills. “Without an understanding of language and sound sensitivity, neither one of those disciplines is going to be successful. So basically that's it.”
She describes two particular students currently in her class; one teaches pre-K and the other high school instrumental. When focusing on decoding, each student first referred to the National standards for the grade level they taught. The student teaching pre-K, whose standards focused mainly on sound before symbol, created lessons in which the children would identify a particular sound through a variety of activities including movement, playing instruments, clapping, singing, changing the endings to the sound of words, finding rhyming words and the list goes on. “Just actually using the language in a musical setting is creating a rhythm, and beat, and pitch awareness, which is enormously important” she contends. “For my student teaching high school, decoding was viewed at an advanced level in terms of instrument. So it’s a little bit more challenging for them because they're not dealing with language. In terms of their music, they're learning how to articulate on their instruments. Affective types of devices and those types of sound sensitivities in a decoding sense are every bit as important for these older children to be aware of as it is for the younger children. They're still decoding. They're just decoding at a much higher level, but I find that even for people who have been involved in music all their lives, you still are always honing your auditory discrimination skills and being able to hear more refined nuances in sound.”

Her advice to pre-service music teachers or those interested in reading inclusion who may face the need of having to integrate, is to first and foremost learn the language of the reading teacher. “They need to know what phonological awareness and phonemic awareness are and they need to know what morphemes, and phonemes are, and blends. And they need to know what the research is” she fervently states. “They need to know what the current brain research is saying about the similarities in brain function among
tones and language and rhythmic aspects, and timbre in language, and how that all plays into fluency. They need to be very fluent in all of that to find themselves as an equal member sitting at the table with other colleagues in their building.”

She finds that most of your students are receptive to the possibilities and strengths that integration brings to the classroom. Additionally, it helps in the advocacy of music education programs by enabling them to enter into discussions with colleagues in their buildings about the value of what they teach and how they can support reading goals within their own school. It makes the statement that music teachers need to be teaching more music not just reading. “We need to teach music because those skills that we are teaching are transferable and they are absolutely parallel to the reading process” she said.

Professor Hammel continues to provide in-services to school districts in her state helping both music and reading teachers understand the language. What is her philosophical perspective on arts integration? “You know, that's one of the things we kind of have to juggle a little bit because I firmly believe we should teach music for music's sake” she says. “We are music teachers. That's what we do and I think we need to be out there, you know, really promoting music as a subject area that's critical. At the same time, I think we can't close ourselves off to the richness of other subject areas and how they interplays with music. My feeling with all of this is that the music teacher needs to put musical content and concepts first in an integration type of situation and understand that that's their content area and that's what they need to teach.”

Integration is difficult because it takes a lot of study and a lot of time to put together instruction that is really meaningful. “It's very easy to sing songs about the seasons or to sing songs about various science things. I always give the example of the
knee bone is connected to the hipbone song. People use that as an example of integration and I think that's foolish. First of all, you're not teaching anything about music, and secondly, I just don't really think you're helping students understand too much about the physical aspects of their body. So I think we have to be really, really careful to be respectful to all content areas in an integration situation.”
### Table 11

*Overview of participant responses to interview questions*

<table>
<thead>
<tr>
<th>Common Themes</th>
<th>Other Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. How do you define integration?</td>
<td></td>
</tr>
<tr>
<td>Maintains integrity of integrated subjects</td>
<td>A subject with its own range of content</td>
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<tr>
<td>Sharing of instructional strategies</td>
<td>A process (the way learning takes place)</td>
</tr>
<tr>
<td>Reciprocal</td>
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<td>Q2. What educational philosophy guides you in creating integrative practices in the music classroom?</td>
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</tr>
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<td>None</td>
<td>Comprehensive musicianship</td>
</tr>
<tr>
<td></td>
<td>Sound Ways of knowing</td>
</tr>
<tr>
<td></td>
<td>Holistic learning</td>
</tr>
<tr>
<td>Q3. What background/experiences do you have in reading education?</td>
<td></td>
</tr>
<tr>
<td>Professional development</td>
<td>Textbook and scholarly materials/readings</td>
</tr>
<tr>
<td>Collaborative experience with other educators (both arts and non-arts)</td>
<td></td>
</tr>
<tr>
<td>Q4. How do you introduce reading integration in the general music classroom?</td>
<td></td>
</tr>
<tr>
<td>Understand the content of the reading/language arts (aural-phonemic awareness, visual-iconic representation, sequencing, decoding, comprehension)</td>
<td>Define various forms of integration</td>
</tr>
<tr>
<td>Make natural connections</td>
<td>Review brain research</td>
</tr>
<tr>
<td>Use reading strategies (decoding/comprehension)</td>
<td>Incorporate children’s literature</td>
</tr>
<tr>
<td>Embed the content of reading within the music course</td>
<td></td>
</tr>
<tr>
<td>Use reading terminology</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5
Discussion and Conclusions

The purpose of this study was to examine how NASM accredited music education degree programs from public and private universities throughout the United States address reading literacy (language arts) integration within the undergraduate music education degree program. This chapter provides insights related to direct results of the study, and also considers larger questions of music and reading integrative strategies, some of which are beyond the limited scope of this study.

Discussion of Research Questions

Research question 1. What, if any, reading course is currently included in the undergraduate music education degree program?

More than 50% (N = 54) of NASM universities/colleges examined in this study included some type of reading content course as a component of the degree requirement for the undergraduate music education degree. It is important to note that this information was based on a course title search only within degree programs, which include some level of subjectivity when identifying universities that met this requirement. To eliminate as much subjectivity as possible, the researcher selected courses that explicitly used key words regarding reading (i.e., reading, literacy and language arts). Example of course titles selected for the study included Integration of Literacy Instruction in the Content Areas, Teaching Reading in the Content Area, Teaching Reading and Language Arts, etc.

Determining the course function and context of each course based on course title key words (i.e., reading, literacy, language arts) posed future complication for the study. Due to the analogous use of the term “reading” and “literacy”, it was difficult to
determine specifics. As discussed in Chapter 2, the term literacy has various meanings determined by the context (Roberts, 1995; Shi & Tsang, 2008). The term “reading” and “literacy” is used in both music and language arts however, the medium for which the term refers to vary. For example, literacy could refer to music literacy which is the comprehensive understanding of music, including reading and writing. Levinson (1990) states

[Music literacy] consist in the sorts of factual information about music that a common reader is expected to possess and which enable him or her to understand discourse which takes music or musicians as its subject [...] Being musically literate is being sensitive to differences, departures, and digressions, relative to internalized norms of style, genre, and form. It is responding to secondary features of musical structure – timbre, tempo, dynamics, and phrasing – in a way framed in the awareness of the physicality of the instruments which make that structure sound. (p. 18)

The term “reading” could refer to the interpretation of music’s notation system. For example reading music could be understood as reading half, quarter, eighth and rest notes in a given measure. Consequently, courses including “reading” or “literacy” within the title could be interpreted differently by instructors on how to approach and teach the course. In fact, one participant in this study commented

“I think we have to understand that there really are several aspects to this because when people speak about literacy, reading literacy, first there’s a huge misunderstanding about what literacy means to begin with. And so in any kind of discussions, if you write about literacy, you need to define what you mean about literacy because there are going to be ten other people out there that have a totally different point of view about it. And so I think it’s really, really important to say this is what I think literacy is and this is what literacy is in the reading content area and this is what literacy is in the music content area and just make that very clear up front. Or else there will be lots of confusion about what you mean.”

What is not evident, regardless of the course title, is if the course is taught as an independent subject course separate from music (i.e. typically in the College of
Education) or through a more inclusive process (i.e. typically in the Department/Schools of Music). Where such a course is offered may determine the structure, content and function of the course. This inquiry is nestled among the recent dialogue regarding university and higher education institutions looking more into unifying course curricula among all discipline areas. Some scholars believe that separate subject course offerings may leave room for disconnection and a limitation of transferability of how information from one course applies to another course (Beane, 1995; Drake, 1993; Gardner & Boix-Mansilla, 1994; Palmer, 2004).

While reviewing the offering of such courses in music education degree programs, results indicate that the majority of reading courses were offered through the College of Education (92%). Also, when analyzing the content of courses, all courses appeared to teach reading content and little more than half of the courses (52%) implied that the course goal is for students attain reading knowledge and learn how to implement the knowledge within their specific discipline area (i.e., Reading in the Content Area, Content Area Reading, Reading and Writing in the Content Area, Teaching Reading in the Content Areas). However, one might speculate that such courses are comprised of education majors of various disciplines (music, art, science, math, etc.); therefore the probability of content focusing specifically on music and reading may be unlikely.

Such findings would suggest further study regarding whether it makes a difference what type of reading course students take. More specifically, (1) when music education pre-service teachers take reading courses outside of school/department of music, what type of reading content is being taught and specifically how are pre-service music teachers taught to incorporate such content within the context of the music
classroom, (2) if the music education pre-service teachers takes such a course in the school/department of music, what reading content is taught and specifically how are pre-service music teachers taught to use such content and incorporate it within the context of the music classroom; and (3) do students learn more content in one form or type of class than the other? It is possible that music education majors who take an isolated reading course may learn some form of reading content, however it was beyond the scope of this study to examine if and how the reading content is transferred from language arts context into music context and how pre-service music teachers are explicitly taught to transfer such knowledge between the two areas.

Although more research in regard to which department provides the reading content to pre-service music education majors is needed, there exists another area of inquiry regarding the qualification of the instructor of such courses and the philosophical approach specifically in regards to reading integration in the music curriculum, which affects the content and the presentation of such content in the course.

It can be assumed that the student taking a reading content course in a College of Education would be taught reading content by a reading specialist. It is probable that such a person would have little to no music knowledge and understanding. It may be assumed that students would receive very strong reading content knowledge but little understanding in regard to transferability of reading content into music content. On the other hand, students who may take such a class in a school/department of music would probably be taught by a music specialist with little or no reading content knowledge, therefore, may learn quite a bit about transferability and integrative activities, but not receive accurate and adequate content in reading.
It is important to note that though incorporating reading content into the undergraduate music education degree program is becoming more standard, disparity of the quality of information students receive may be determined not only by where the student takes such a course, but also who teaches such a course. It would seem that the best instructor of such a course would be one that has content knowledge in both music and reading.

Interestingly, interview results indicated that two reading courses were taught by music education faculty who taught pre-service music teachers the process of effective reading and music integration. This particular fact suggests further study on two levels: (1) “do music education instructors feel more comfortable with teaching reading literacy and making the transfers to musical literacy with their students?” and (2) “does the perspective of the instructor affect how the content of non-music reading classes for music education majors affect transfer to music education and its subsequent integration of the two subject-matter literacys?” It is also worth mentioning and probable that music education instructors are not necessarily informed about the content of reading classes not taught in their respective music departments. They may just value and subsequently teach reading content, regardless of other extra-departmental course.

Further examination of degree programs provided an interesting discovery in that reading was the only non-music subject (e.g., math, science, and social studies) included as a requirement in the undergraduate music education degree program. It is beyond the scope of this study to determine a reason but it can be assumed it is the result of university/colleges response to what is recognized as a the national “reading crisis”. The bigger question is why reading?
Undeniably this is not the first time the United States has faced a ‘crisis’ regarding a specific subject area. In the 1950s, integration was a growing concept, however in 1957 the launch of the first earth-orbiting satellite, Sputnik ignited what was known as the “Sputnik Crisis” which slowed the progression of integrative practices tremendously as initiatives toward more emphasis in sciences and math increased. Interestingly with decline of the push towards integration, there was no movement to incorporate science and math into music education as the current push to incorporate reading. One could question why reading and not other subjects like math and sciences when each area seemed to have experienced a similar type crisis. The United States identifies anything that impedes its ability to compete globally as a crisis. Sputnik was considered a technological crisis whereas the new “reading crisis” facing the United States is a main contributor of the bigger economical crisis that emerged in the 1980s. At the time, Jennings (1987) called this economic crisis the Sputnik of the 1980’s and stated

Thirty years later [after the Sputnik crisis], in 1987, the United States faces a similar crisis. For the first time in nearly four generations, America has become a debtor nation, dependent for its financial needs on investment from other countries. Nations that only a few years ago we considered to be economically and technologically inferior have now surpassed us in many areas of manufacturing and trade. (p. 104)

Subsequently, studies implemented by various business groups in the 1980s found a strong link between the educational level of people and a county’s ability to compete economically with other countries. Initially, such competitiveness was believed to be contingent on proficient levels of math and science which led to the School Improvement Act of 1987, initiated to disperse federal aid to the development of programs involving the “retraining of science and math teachers” (Jennings, 1987, p. 109). However after more investigation, policy makers began to realize that a subject contributing to the
nation’s competiveness was not necessarily contingent on math and science but to an overwhelming degree reading literacy had a significant effect on dealing with any economic issue.

Jennings (1987) quoted Congressman William Goodling’s remark during the 1987 hearing for the expansion of the School Improvement Act through 1993 as stating

For the last three or four weeks we have heard a lot of discussion on this floor in which we are solving all the trade problems, all the trade deficit problems, all the defense problems, and all the foreign policy problems, and I am here to say that we cannot solve any of those unless we solve another serious problem we have in this country. That problem is that we have somewhere between 26 million and 60 million functional illiterates. Unless we attack that problem, the rest of the things we do will go for naught. (p. 109)

Soon policies including educational standards regarding reading involved expanding the definition to include the ability to read, write, and speak in English and compute and solve problems at levels of proficiency. It was believed increasing reading levels would ensure individual opportunities for personal fulfillment and participation in society, improve economic productivity, and strengthen the nation’s competitiveness in the global marketplace. As a result educational reform became a focus to increase this new level of literacy that contributes to the ability of a person being able function successfully in society or being “functionally literate”.

But the question remains as to why reading content is included in music education degree programs during this ‘reading crisis’ while other subjects are not? According to the No Child Left Behind Act of 2001, established to ensure every child attains grade level standard, reading/language arts, mathematics, and science are subject areas that are being assessed in both elementary and secondary levels to determine levels of proficiency (basic, proficient, advanced). One would question that since these subjects (math,
science and reading) are being assessed and deemed critical for individual success, why is there emphasis on the inclusion of just reading in the music education program. Is it possible that emphasis could be a result because; (1) reading is the foundation of all knowledge and a subject that crosses disciplines (i.e., math, science, social studies, music, art) and (2) the ability to read affects every person regardless of who they are and as discussed in Chapter 1, each domain (prose, document and quantitative) in which literacy is evaluated in the United States involves the ability to read.

The inclusion of reading courses in the music education degree program may also imply how universities/colleges are addressing the national reading crisis in an attempt to provide students with reading content to which they can assist with reading intervention in the classroom. However, if the reading course is used in response to the recognized reading crises there is no standard connection between course offerings and state literacy rates. For example, in a post hoc comparison between states, their 2003 literacy rates, and reading course requirements indicate that universities in states with high percentages of low prose literacy skills do not necessarily have requirements for a reading methods class for music education majors (see Table 12). As discussed in Chapter I, prose literacy is the knowledge and skills needed to perform prose tasks (i.e., to search, comprehend, and use information from continuous texts, such as paragraphs from stories) and a domain in which the United States assesses literacy. It is unknown if there is merely a coincident in which more investigation would be required to determine if there were any correlation between such pre-service teacher training and literacy outcomes. It was beyond the scope of this investigation to determine as to what initiated the addition of the reading
courses to the degree programs, when and why the reading courses have been added to the curricula. This warrants further investigation.

Table 12

Distribution of music education programs by U.S. Equity Assistance Centers with 2003 State Estimates of Low Prose Literacy Rates

<table>
<thead>
<tr>
<th>Region</th>
<th>States Represented</th>
<th>Total Schools</th>
<th>Universities/Colleges with required reading course</th>
<th>Universities/Colleges with no required reading course</th>
<th>State Estimates of Low Prose Literacy 2003 (%)</th>
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(continued)
Table 12

*Distribution of music education programs by U.S. Equity Assistance Centers with 2003 State Estimates of Low Prose Literacy Rates*

<table>
<thead>
<tr>
<th>Region</th>
<th>States Represented</th>
<th>Total Schools</th>
<th>Universities/Colleges with required reading course</th>
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**Research question 2.** What are the perceptions and attitude of reading integration in NASM accredited public and private colleges/university music teacher preparation programs?

Results of the study confirm that music professors’ perceptions and attitudes toward reading integration are favorable, in general. This outcome parallels Gerber and Gerrity (2007) study who found that music teachers’ attitudes towards reading inclusion were also favorable. From the survey responses, the majority of music educators are aware of what is recognized as the national reading crisis (73%) and a majority of the professors (83%) who participated in the study also believed that pre-service teachers should be knowledgeable about reading instruction issues/concerns that affect public school curricula. It is likely that these professors are keenly aware of the current emphasis on reading in the public schools systems. According to Abril (2006) and Hinde et al. (2007) all content areas are at risk of being cut in order to make additional time for reading, writing, and math intervention. As stated by Rabb (2004)

> Because so much money is at stake, school district after school district is reducing the time given to other subjects in K-8 so as to intensify the teaching of reading and math, which alone are tested under the provision of NCLB [No Child Left Behind]. History, civics, geography the social studies in general, and the arts are being virtually wiped out. (p. 1)

As a result of policies such as the No Child Left Behind Act that require assessments in reading, research studies in regards to reading integration occurs in all subjects (e.g. social studies, music, art, science) in order to maintain their role in the curriculum (Boyle-Baise et al., 2008; Burger & Winner, 2000; Hinde et al., 2007; Patrick, Mantzicopoulous, & Samarapungavan, 2009). It is probable that pre-service music teachers may encounter the possibility of justifying how they will address the “reading
crisis” within the music classroom. Seventy-three percent of the professors believed that their university/college prepared pre-service teachers to be knowledgeable about reading instruction issues/concerns. This response could be attributed to the fact that more than half of the universities/colleges investigated include reading courses as component of music education degree program. This assumption would indeed indicate that students are receiving some information about reading but only further analysis of the course content would determine whether issues related to reading instruction are addressed. However, when cross tabulated with instructor specialization (band, choir, string, general), results indicated a significant difference. Professors with specialties in choir, band and elementary felt that the university prepares pre-service teachers to be knowledgeable about reading instruction; however professors with string specialization feel that their university did not prepare pre-service teachers to be knowledgeable about reading instruction. Reasons for this difference are unknown and warrant further investigation about the perception of reading integration among music disciplines (band, choir, orchestra).

A large majority of music education professors agreed (92.8%) that music can serve as a tool to support other academic subjects. These findings are not surprising as the effects of music on cognitive development and academic achievement (Costa-Giomi 1999, 1995; Huang, 2004; Lowe, 1995; Lynn et al., 1989) are active research areas in the music education community as discussed in Chapter 2. According to Cornett (1999) the arts provide “a neutral ground to learn about varied and multiple communication symbols, content disciplines, skills, histories, values and beliefs” because the arts transcend all cultures and time periods (p. 5). The arts also assist in developing creative
ways of thinking about questions and problems and provide a perspective beyond learning isolated facts (Boyer-White, 1988). One participant in this study begins and ends the integration discussion with brain research and how music reinforces the physiological process of the brain as it develops.

However, there were varying opinions on whether music should be used for such a purpose. Seventy-four percent believed music instruction should include reading content and fewer (64.2%) thought music instruction should include other academics (e.g., math, science, etc). Although this indicates a majority support for integration, it is a decrease as compared to the number who believed that music can serve as a tool. This also parallels Gerber and Gerrity’s (2007) findings, that the attitudes of music teachers toward reading integration, although favorable, were not eager about the concept. It appears that although music educators are aware that music can support other subjects, there is hesitancy of whether music class time should be devoted to discussion of other subjects. One can speculate that the philosophical conflict among the music education community with regards to teaching “music for music’s sake” or teaching music in support of other academics may attribute to how the content is approached or used. The cliché of “music for music’s sake” is descriptive of the formalist philosophy of music education. Believers of this philosophy view the study of music as a “discipline” with the primary focus given to the accumulation of information or the development of skills within the discipline (Aprill, 2001; Eisner, 1998; Oddleifson, 1994). Essentially, “the study of ‘the fundamentals’ is, in and of itself a beneficial thing” (Reimer, 1989, p. 25). Barry (2005) states

while it certainly may be useful to explore the positive effects that music and arts instruction may have upon non-arts objectives, it seems logical that we should
also be concerned with the impact that integrated curriculum has upon music education. (p. 59)

Results could also be attributed to the controversial discourse and supporting research regarding arts integration among music educators about the concern that music teachers could be placed in a subservient role to other subject teachers if they participate in integrative practices. For example, as mentioned in Chapter 2, Barry (2008) contends that “too often, well-meaning attempts to implement arts integration result in the arts being relegated to a supportive but subordinate role to other academic subjects. In these situations, music may be viewed as a useful tool for teaching other subjects, but the intrinsic value of music education is disregarded.” (p. 33). Other scholars also verify how music educators have mixed emotions on the topic of interdisciplinary curricula which in part is contributed to concerns that the value of music education may diminish as a result of classroom instruction time being relinquished to assist, tutor or teach literacy (Barry, 2004; Berke, 2000; Bresler, 1995; Whitaker, 1996).

Seventy-one percent of the professors were in agreement that pre-service music teachers should be knowledgeable about reading content. This is supported by Grant and Paige (2007) who found that in order for pre-service teachers to effectively integrate they must have basic knowledge in the different ways of knowing. Additionally, research suggests that with effective integration “subject areas are not given full acknowledgement in interdisciplinary planning; this is usually due to gaps in the curriculum team’s knowledge base and experience, not the lack of a proper place for the subject” (Drake, 1991, p. 22). The question remains as to who should provide this content? As discussed earlier in this chapter, depending on the qualifications of the instructor the content received could vary and could weigh heavily towards the knowledge level of the
instructor. For example, the course *Teaching Reading in the Music Content Area* and *Music and Language* are offered through the College of Education and therefore, by the title alone one can assume that the instructor of the course has a music and background. However, *Teaching Reading in the Music Classroom* is offered through the school/department of music and it can also be assumed that the instructor of the course has music and reading background. It must be noted that such a course with an explicit reference to music and reading offered through the College of Education could mean that the music education degree program is “hosted” in the COE and that such a course could very well be taught by a music education faculty member. Furthermore, two courses with titles that do not include music (*Teaching Reading in the Content Areas and Literacy in the Content Area*) are offered through the school/department of music. This fact suggests further study is needed regarding whether pre-service music teachers are to be provided reading content who then would be responsible for providing the information if the purpose of receiving the content is to be used in the music classroom.

The greatest disparity among survey responses was with regard to the belief that music education teacher programs should train pre-service music students to support basic reading instruction in the music classroom; 55% agree whereas 26% disagreed and 19% had no opinion. This is a contradiction to the current literature which indicates that if students are not equipped with the knowledge of effective integrative practices, the likelihood of music objectives being compromised is a possibility. As Barry and Schons (2005) and Snyder (1996) contend, music teachers who are unprepared to deal with integration may “lose sight of music learning objectives” (p. 35). Based on their research findings Barry and Schons (2005) and Barry (2004) suggest that universities/colleges
incorporate integration concepts and strategies into the teacher preparation programs. Barry (2004) suggests that beginning teachers “may need extra instruction on how to embrace integration without sacrificing the standards and goals of their own subject areas” (p. 69). Research also indicates that without extensive training, integration tends to remain at a low level (Bresler, 1995). Studies by Wilson (1995) and O’Brien and Stewart (1990) that examined undergraduate music education majors’ attitudes towards reading found they felt their sole responsibility is toward their content area and felt inadequate in teaching reading due in part to insufficient training. This supports the philosophical debate in the music education profession previously mentioned and would question how, if possible, could pre-service teachers’ perception of integration be broadened and presented in a way where students’ values can be changed to embrace the possibility of teaching aspects of another subject area within the music classroom.

Confidence in teaching pre-service teachers the process of reading integration in the general music course also resulted in a disparity of responses; 60% agreed, whereas 21% disagreed and 19% had no opinion. As discovered in the cross tabulation results, instructors who felt confident teaching pre-service teachers the process of integration, were significantly more likely to have some background knowledge and/or experience in reading instruction. Although it was difficult to determine the reading background exposure of the participants due to the fact that the options could exceed to more than one, results indicated that instructors’ reading experience was mainly attained through professional developments (48.9%) and workshops (46.7%) and less on a college reading course (28.9%). These results would question how effective college reading courses would be as the only training pre-service students receive and could suggest that
additional training is needed outside of the reading course so that pre-service music teachers are comfortable with the notion of integration. Barry (2004) states “training education and music education students to collaborate and integrate before they even begin their teaching careers would likely help future music teachers avoid watering down their curricula” (p. 70). O’Brien and Stewart (1990) results reiterate this fact when they found that in-service music teachers felt inadequate in teaching reading skills due in part to insufficient training. Another area of inquiry posed by these results is the type of reading content instructors learned in these experiences. For example, did these professional developments and conference/workshops just teach reading content or did they include integrative strategies regarding music? Under what context did these experiences occur? For example, were they specifically music related or do instructors’ values regarding integration with other subjects affect their decision to independently seek such opportunities?

Interestingly, more instructors (73.8%) attest to demonstrating reading integrated experiences in the general music course. This is quite similar to the results of Gerber and Gerrity’s (2007) investigation of music teacher attitudes toward teaching reading skills in the music classroom who reported that 78.6% of the respondents “agree, to varying degrees, that they indeed teach language reading skills in music classrooms.” Based in these results, it is suggested that an in-depth qualitative study is needed in order to examine the integrative strategies used in these courses.
Research question 3. What “philosophical lens” is used to develop a reading and music integrated curriculum for pre-service teachers and how is it interpreted in practice?

Upon analysis of the interviews, there exists a differing of philosophical approaches concerning integration. Each participant used a different ‘philosophical lens’ in their approach to reading integration including comprehensive musicianship, holistic learning and ways of knowing. This outcome supports the literature cited in Chapter 2 of the existence of varying definitions, philosophies and approaches to integration (Colwell, 2008).

Although the philosophical lenses differed among the instructors, they did share an underlying premise of a comprehensive, holistic approach that meets the needs of the entire child which formed the basis of their approach towards reading integration in their course. Although they all embraced the philosophy of “music for music’s sake,” each instructor also believed that language is inseparable from music and that the integration of one does not preclude the other. Terms used in the interview describing this unique relationship between the subjects included natural and reflective of one another, an inseparable partnership.

Upon reflection on the impact of Gardner’s theory to student learning in particular to music, it appears that the impact of the music and reading connection provides an opportunity for “bilateral learning” in which “bilateral transfers” take place. With the idea that music is a “way of knowing,” when connected to reading, multiple opportunities for various teaching and learning strategies can be shared between the two. The result is
that music can help to enhance learning in reading, and when integrated correctly, reading will enhance the understanding and learning of music.

Bilateral is having two sides that reciprocally affect two parties (Merriam-Webster, 2010). “Bilateral learning” a phrase that emerged in the business sector, refers to the combination of both exploratory and exploitive learning that are the fundamental approaches for organizational learning, a necessity among firms to gain an advantage among their competitors (Snell, 2005; Williams, 2007). In this model, the use of “bilateral learning” involves strategic planning that integrates aspects of both exploratory (the pursuit of knowledge outside a firm’s current domain) and exploitive (the refining and deepening of a firm’s existing knowledge) learning that allows employees to acquire knowledge (Kang, Morris, & Snell, 2007). March (1991) describes exploration as including “things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation [and] exploitation including such things as refinement, choice, production, efficiency, selection, implementation, execution” (p. 71). It is also suggested that these two types of learning are complementary in their effects (Kang et al., 2007), however there are also claims that it may be difficult for exploration and exploitation learning to occur simultaneously (Levinthal & March, 1993). Although a relatively new concept, bilateral learning, can perhaps describe the relationship between music and reading.

In the business sector, exploratory and exploitation learning are components of a larger umbrella called organizational learning; a process of acquiring, transferring and integrating new knowledge which can originate from sources both internal and external to the firm (Kang et al., 2007). What is assigned as exploratory and exploitation learning is
rooted on what intellectual knowledge a firm seeks to acquire. For example, in Williams’ (2007) study involving telecommunication firms discussed in Chapter 2, the firms faced simultaneous pressure to expand networks, improve service quality, establish positive customer relationships and eliminate waiting lists for service, so they turn to their partner for many types of knowledge. In this case, the firm used exploration learning (knowledge gained from outside firms) and exploitation learning (refining current knowledge and practices within the firm) to increase productivity and proficiency in the areas of concern.

If applied to the concept of music and reading, “bilateral learning” would suggest that these subjects are complementary of each other and could serve to assist in the acquisition of knowledge. As a result, one or the other would become exploratory and the other would be exploitive in nature. Specifically pertaining to this study, reading content would be exploitive and music would be exploratory. Reading would explore opportunities for increased knowledge in the content of music. The results of this study support the notion that bilateral learning can occur between music and reading as indicated by the inherent connections detailed in the instructors’ personal experiences and the literature discussed in Chapter 2.

With this in mind, a bilateral transfer of skill can occur between the two parties. As discussed in Chapter 2, the use of “transfer” can provide an opportunity to strengthen skills and/or understanding of content and is essential for applying cognitive information learned in any format useful in one’s own situation (Madsen, 1986). Serpell et al. (2006) and also suggests that poor academic achievement can be linked back to the inability to “transfer.” A bilateral transfer of skill is a concept often examined in the motor learning
literature in relation to the transfer of fine motor skills from the dominant to the non-dominant side or vice versa (Cote, Kimmerle, & Patterson, 2007). For example, a bilateral transfer of a manual skill would be the notion that acquisition of a particular skill involving the left hand is accelerated if that skill has already been learned for the right hand and vice versa. Regarding music and reading, the results of the study suggest that transfer of knowledge occurs between music and reading. One could suggest that since the two subjects are a reflection of one another, a bilateral transfer of skill could also assist in students attaining proficiency in both academic areas. Linking reading within the context of music instruction strengthens skills and allows students to develop the subconscious reading strategies used in music that they can transfer to the reading classroom. Results of this study indicated that some instructors incorporated reading assessments and strategies to demonstrate their effectiveness in evaluating music comprehension. One participant, who also taught the reading course, offered by the College of Education, commented on how the reading course was structured to incorporate reading assessments:

Through the [reading] course, we do a whole decoding section so they have to design an assessment for that. Most of these assessments that they design are more on the formative idea for this particular course [reading course] ... For the final unit plan project I try and get to more of a unit type of assessment and when they that, that is more on their comprehension lesson. Everything they do has to have a music focus but they can use integrated content along with it. How they get there is that I try to make them look for musical ways to assess but also they do a unit on writing [technical writing exercise] and I model to them how to do structured listening with a variety of musical pieces. They listened according to a strategy (meter, harmony, melody, form, style, and composer). Students can come up with their own rubrics that would be for performance or something creative and we also use a reading rubric (e.g., Think-Pair-Share or Jigsaw)

Although the activity described above occurred in the reading required course and not the general music course, it does however suggest that notion of the bilateral transfer
opportunities between music and reading is probable. This particular fact suggests further investigation of bilateral transfer of skill regarding (1) the use of reading assessments for music understanding in either required reading courses or general music courses of music education degree programs and (2) the effects of reading assessments on music comprehension in the general music classroom.

**Research question 4. What content and experiences are included within the general music course that addresses reading and how is it implemented?**

According to Barry (2008), music teacher education programs can play a vital role in preparing music educators to effectively integrate so that the music content will not be jeopardized.” Based on the results of the study, music and reading integration within the general music course occurred when (1) instructors had background collaborative experience with experts from other fields of study, (2) reading terminology was embedded within the course content, (3) reading strategies were incorporated with regard to music content, and (4) modeling how integrative strategies are implemented.

**Background collaborative experience.** Instructors had practical experiences with other pre-service teachers from different content areas. The literature states that interdisciplinary studies involve collaborative work so that all persons involved can contribute how their content can be addressed through the theme, topic, essential questions, etc. Perhaps, pre-service music teachers will benefit greatly from collaboration with their peers across disciplines. As one participant stated “[when] they’re in each other’s faces as they’re working, then we’re getting better integration between the subject areas. When everybody works in isolation, we don’t get that overlapping.”
Integration with other disciplines is recommended by the national standards of music, alongside reading notation, singing, creating, composing, etc. Music teacher preparation programs are the platform where pre-service teachers are taught how to teach such content. Several questions are posed based on these results: Are students expected to learn integration after or during clinical experiences or after graduation (i.e. professional development) or is it one of the pedagogical areas that students may feel insufficient in like classroom management, lesson planning, sequential delivery of instruction (Brophy, 2002)? If so, is integration something that a practicing music teacher can learn to do effectively on his/her own? Colwell’s (2008) research on integration perceptions and attitudes from in-service classroom and music teachers found that the interaction and collaboration between music and classroom teachers provided an increased comfort level towards music integration for the classroom teachers. She suggested that

pre-service training could perhaps involve a music methods class for elementary teachers that occasionally meets with methods courses for music teachers to that these relationships could be modeled and the concept of integration be introduced prior to either group’s becoming focused solely in their independent curricula. (p. 40)

The literature presented states that the ideal situation of integration would be through a close collaborative approach between both arts and non-arts teachers of various disciplines (Bresler, 1995). If such is not the case, at the very least, the instructor should have a sufficient background in both subjects so that the integration of the content is maintained.

**Reading terminology.** All instructors emphasized the importance of using reading terminology when discussing music content and to be clear about the purpose.
These findings are supported by Youm (2007) whose observation of the development and implementation of an integrated arts-focused curriculum identified a key component as the use of the same vocabulary by all teachers. Lynott (2008) also suggested that use of the same terminology among educators allow for consistency across the disciplines and create less confusion for students. As one participant commented,

> it’s very important to be very clear about where the line is drawn between decoding and comprehension and specifically aspects of Bloom’s taxonomy, skills versus concepts. All of those things need to be clearly delineated in any kind of discussion about literacy [...] it’s not just being able to read words on a page or sing a melody. True literacy goes way beyond that and so all of those terms and concepts need to be fully defined.

This certainly supports the findings of many scholars cited in Chapter 2. For example, the ability to decode does not equate to comprehension in both cases of reading and music. Decoding and comprehension are two separate skills. Ultimately, the purpose of teaching both reading and music is for students to make meaning of what they are decoding.

Participants also demonstrated the necessity to know the language of the reading teacher. Students were instructed on the meaning of terms including phonological awareness, morphemes, phonemes, blends, fluency, phonic, sight identification, comprehension and how they are reflected in the music. Additionally, using the same terminology allowed students to transfer information from one subject to the other. One participant commented on this process during an activity using storybooks

> we took a piece of music and picked out the musical concepts that were important in it, and what would they teach and what the musical objectives would be? But, then, I also had them look at a children’s book and we went through and found the phonological aspects of it. We looked at how the book was structured, in other words, did the illustrations match particular vocabulary, or were the texts written bigger or smaller, or things like that. So, I’m having them really go back and
forth, all the time and saying “Okay, what is it that they’re decoding in language? What are they decoding in music?”

Several studies have found that integration of music into other subjects may be difficult due to a lack of knowledge of the content (Brophy & Alleman, 1991). When there is limited knowledge in a subject that is desired to be integrated, the integration process becomes difficult. Results of the study support this statement as all participants agreed that understanding the content and vocabulary of reading is essential in integration.

**Use reading strategies.** Implementation appears to make use of bilateral learning opportunities between music and reading. Instructors benefited from the inclusion of reading practices, strategies and assessments in which students were required to demonstrate inclusion of reading strategies in their own work and assignments to be submitted. As described earlier, one participant used reading rubrics and lesson plan templates to help students think through the inclusion of reading strategies. Two of the participants incorporated storybooks in their teaching practice which is supported by the research of Kinniburgh and Byrd (2008) and McGowan and Guzzetti (1991) who found the use of children’s literature as an effective integrative practice as it provides variety, interest, comprehensibility, relevance and citizenship for social studies and mathematics. In music, the use of storybooks is a common practice due the parallelism that they share (Gauthier, 2005; Hansen & Bernstorf, 2002). For example, both music and story have a creative component and a process of construction.

Using reading strategies may not be implausible as evident in the research of Hahn (1987) who hypothesized that the use of the whole-to-part reading strategies within the context of music would help improve sight-reading abilities in beginning string
students. Her findings did conclude that both groups (experimental and control) benefited from the whole-to-part strategy. Notable in this study is the researcher’s discovery that the control group demonstrated an unconscious use of the whole-to-part strategy over time.

**Modeling effective integrative practices.** A factor to integration implementation found in the study is that the instructors modeled how both reading processes and strategies were reflected in music and all instructors demonstrated integrative practices. As one participant stated “I kind of go back and forth between the two. In other words, I’ll take music, and have the students look for the literacy, or look for the language aspect and have them look for the reading of the language. But, I also go the other direction [music]”. Another participant remarked that “It's [language arts] so integrated for me that I don't know whether the students actually stop to think about it as an academic thing because they're always decoding. They're always making sense of what the text is (...) it [language arts] is taught in the music curriculum because you cannot get away from language arts when you're doing general music. It's part of the way you put things together.”

The strategies used in this study also support the possibility that music teachers can integrate under the self-contained model. However, a key factor that made it successful is for teachers to have knowledge of both content areas being integrated to the degree that reciprocal learning took place. When the instructors modeled reading integration it assisted in providing students with the information and techniques which they were able to demonstrate through assignments. Furthermore, as stated by one of the participants, students were subsequently able to perform integrative strategies within their
own teaching. One could speculate that with experience in reading and music integration within the degree programs, students will be able to effectively discuss how music enhances reading using the terminology and content that is familiar to the language arts teacher ultimately advocating the importance of music education in the curriculum.

As discussed in Chapter 2, if effective integrative strategies are not modeled to pre-service teachers then it becomes difficult for them to implement integrative strategies in their classroom. Barry (2005) who investigated integration within elementary music programs asserted that

Teacher education programs in colleges and universities should incorporate integration instruction into the training of future teachers. Music education programs should seek to inform future music teachers about integration concepts and strategies, and also prepare them to serve as peer educators. With this background, music teachers could inform classroom teachers about the role of music education in the curriculum and offer suggestions for music integration strategies in the classroom. (p. 70)

The integrative practices of the participants in this study supported this research and are consistent with Barry’s (2008) discussion on the parameters for integration within the context of music courses as: (1) students should be taught all the knowledge and information surrounding two-way integration so that they understand how to implement the process with respect to all disciplines involved, (2) opportunities for collaboration should be provided so students are well-equipped to work in partnership with their colleagues from various disciplines and (3) students should be prepared to become advocates on music’s place, purpose and benefit to the basic curricula.

Although the results of this study indicated that each instructor taught both reading and music content in the general music methods course (or course equivalent), it was beyond the scope of this study to determine the level of reading content students may
have acquired prior to taking the general music course that may have attributed toward their understanding of the reading material presented. Additionally, it must also be noted that while this study was in search of integration occurrences in the general music setting, the submission of syllabi from the music course structured for education majors suggests that although instructors know that music can be integrated with other subjects, integration within the music methods course is not a common practice. This may be a reflection on how integration is perceived in the higher education music community. Of the total syllabi submitted (N = 12), 50% of the syllabi submitted were for courses taken by elementary majors and subsequently, four syllabi specifically mentioned integration as a topic of discussion within the course. It is acknowledged however that although course syllabi may not include integration explicitly within the text, there may be instructors who do include integration as part of the course components. With these results along with the fact that a number of research studies that focus on integration examine music integration by general educators far outnumber studies that investigate integration occurrences among music educators, one could speculate that the perception of music integration is that it is more of the responsibility of the general educator to incorporate music content within the teaching of other subjects. However, National Music Standard 8 recommends that students should be trained in the relationships between music and other subjects and as indicated by the results of this study and research in Chapter 2, integration is a process that has to be taught so that pre-service music teachers know how to effectively do so without jeopardizing music content. Barry (2005) stated in contrast to the large number of studies addressing many general aspects of integrated curriculum, there is a glaring lack of research concerning the particular implications of integrated curriculum for music education. This review of the literature failed to reveal any studies specifically addressing integrated curriculum
and music teachers. While it certainly may be useful to explore the positive effects that music and arts instruction may have upon non-arts objectives, it seems logical that we should also be concerned with the impact that integrated curriculum has upon music education. (p. 59)

Typically, the content of the standard general music methods course allows pre-service music teachers to become familiar with the content, methodology, and age appropriate materials of an elementary school music curriculum. Due to the broad scope of content addressed in this course, how the course is approached regarding whether to include integration is at the discretion of the instructor. It is also possible that integration may or may not be addressed in other required music education courses. This warrants further investigation.

**Implications for the Field**

Although music and reading are two very independent subjects upon the conclusion of this study there are commonalities that extend beyond the basic connections of sound, decoding, fluency, vocabulary and comprehension; commonalities that appear to be transient between the two disciplines. The following will expound upon these broader commonalities.

1. Both reading and music have utilitarian (functional) and aesthetic aspects. This study examined the utilitarian aspect of reading and its function in society that is distinctly for the purpose of “reading for reading’s sake” (e.g., reading the newspaper, applications, bus schedules, contracts). The utilitarian aspect of music is widespread and also serves outside of the purpose of music alone (e.g., background music in a department/grocery store, therapeutic, ceremonial, religious). In addition to their functional purposes, both music and reading also have an aesthetic aspect. Although this study focused on the importance of reading as a functional aspect of life, it cannot be
overlooked that reading in and of itself can provide pleasure and satisfaction to the human spirit. For example, an individual may choose to read a certain book based on his/her specific taste and interest for pure enjoyment or for intellectual discovery. This same individual may also choose a piece of music in the same manner. For both music and reading, being actively engaged in the reading, composition and listening to music and/or text offer moments of “aesthetic sensitivity” (Reimer, 1970, p. 111). This aesthetic experience is based on personal preference and individual perception of beauty as it pertains to reading and music.

2. Both music and reading transcends other subjects. The results of this study make the implicit suggestion explicit in nature and gives grounding to the notion that reading is a subject that crosses disciplines. No one can argue that reading is a skill used to understand other subjects (e.g., reading of textbooks, deciphering word problems). Likewise in a mirror effect, music incorporates skills and concepts of other subject areas. For example, mathematical skills such as addition and division are used to understand time signatures and organization of measures. The overtones and acoustic properties of instruments are scientific in nature. The life story of a foreign composer, his work and the parallelism of life in the United States along with the origin of instruments and music traditions from other cultures connects with social studies. Reading’s intrinsic appearance in other subjects and the intrinsic appearance of other subjects within music truly displays the unique transferability characteristic they both share.

3. Both music and reading are fundamental aspects of daily life. It is apparent that reading is essential to effectively function in society. It is in some form or fashion inundated among daily life experiences. So much so that one would have to purposely
reflect on how often he would use the skill on a daily basis. Likewise, music is also
inundated in daily life experiences. In order to understand the existence of music, music
would have to be taken completely out of society (e.g., radio stations, television
commercials, movies, videos, grocery stores).

Based on these findings, the following implications are made for both fields of
study.

**Reading Education**

1. Reading educators should expand opportunities for reading intervention to
include transfer experiences among subjects that are closely related to reading. With the
connections identified in the study, it justifies that music is a subject that offers
transferability opportunities for reading skills. Dropping music content in order to
provide the exact reading intervention imposed by the classroom teachers does not and
may not necessarily get the job done. As stated by a participant regarding reading
intervention.

   If everybody’s painting the fence, then we’re going to get the fence painted. But, if
everybody who is painting the fence has exactly the same width of brush and
they’re actually only supposed to go over the exact same stroke that somebody
else made, that’s not going to get the job done. What gets the job done is that if
each person uses the tool that they use best, and they learn how to do overlapping,
that’s when you get everything done, because what I know and what I do overlaps
with what you do, but you do some stuff that I don’t do.

The results of this study demonstrate that music can be a resourceful tool in
assisting reading skills through transfer of knowledge. Ultimately, because reading is a
subject encountered in all other subjects, there should be a universal effort to provide
intervention across disciplines (e.g., math, science, music, art, social studies, and physical
education). This would mean a collaborative effort where experts can identify how the
intervention can be manifested so that reading is connected and used within the content area. Experts in the various content areas know best how reading can be used to definitively enhance both content areas and should make that determination.

Nevertheless, from the results of this study, it would also require subject area specialists to attain the necessary knowledge regarding reading so that the infusion of the content is done effectively and both subjects benefit.

2. It is important to distinguish between that terms literacy and reading. For a long time literacy has meant exclusively ‘reading and writing’. However, as presented in this study a contemporary definition of literacy has been expanded to include, in addition to ‘reading and writing’, a comprehensive understanding of a given topic and thus is used in a variety of arena (music, computer, language, media). In the case with reading, reading/language arts literacy would be all aspects pertaining to reading (reading, writing, comprehension). Distinguishing between the term ‘reading’ and ‘literacy’ when discussing reading integration would prove to be beneficial as it would provide clarity on the components and lessen confusion for all parties involved.

3. A return to the aesthetic component of reading as a society could promote motivation for reading for the sake of reading. Strict accountability and assessments of reading in the K-12 education system as attributed to an emphasis on the utilitarian aspect. As a result, the aesthetic aspect of reading has been overshadowed and the ‘teach to the test’ syndrome has almost depleted the fact that reading in as of itself has a basis for pure enjoyment and life-long learning. Instructors examined in this study all embraced the aesthetic component of music and were committed to integrate reading while upholding this component when presenting to pre-service teachers. Perhaps, this
could serve as a framework to guide reading educators on how to balance the pressures of meeting the utilitarian standards of reading with the beauty of the content.

**Music Education**

1. Music educators must continue to make reading connections explicit within music content. As evident from the study, such inclusion can provide benefits for deeper understanding of music concepts. For example, when teaching a choral piece it is inevitable to address language concepts within the text (e.g., vowels, enunciation, diction). Although there is concern that integration could diminish music content (Bresler, 1995; Tytler, 2004). This study provides an explicit foundation on how reading is reflected in music and upon which future scholars and researchers can build. Currently, the ideas of unifying music and reading is one of a sporadic occurrence as this study only details three instructors currently using the practice. However, it does show that instructors are implementing reading integration in the general music course with varying perspectives on the approach.

2. With an increased focus on more reading the general education system (K-12), music educators in higher education should examine their position within the larger picture of Education. Although the ultimate goal is for music education to develop critical consumers and participators of music, music is only a piece of the puzzle. Over 50% of the colleges/universities include a reading course in the music education degree program which suggest that intuitively there is some value in the understanding, structure and nature of reading and there is literature that makes the case that music teachers teach reading. However, as indicated in the survey there isn’t much support among the higher education community for the inclusion of reading integration when preparing pre-service music teachers. There is a notion that an integrative approach is a viable alternative in
educating children. As more music teachers are being asked to include reading within the subject, music teacher training programs will need to examine how the degree will better equip students to be successful in handling this request and teach students to teach to the connections. The difficulty with this issue may be due to the overload of the curricula which eliminates the opportunity to address subject specific content courses. Most music education curricula is filled with performance courses more so than education courses and there is little room to add such courses. What is difficult is providing content for two very large components music and education.

3. Reviewing music education degree program track to include experiences where music education students can interact with other education majors (e.g., courses and workshops). Taking music education courses solely in an environment with little interaction with other education majors causes a disconnect to the reality of teaching in a school environment. When pre-service music students become teachers they become a part of a team that collaborates and unites in a common goal in preparing children to be successful in society. Although revamping an entire curriculum could pose a tremendous feat, one possibility is to include a course that is taken by all education majors (both arts and non-arts) where they learn about all subjects and participate in collaborative opportunities.

Implications for Future Research

Important issues arise from the findings of this study that cannot be addressed with the data but merit some attention in the discussion of how to prepare pre-service teachers to address National Standard #8 of including integrative lessons and furthermore how to do so without minimizing music content. This section discusses some of the insights for future research including investigating the content of reading courses that are
required under the music education degree program, examining the effects of reciprocal
learning to see whether using reading strategies can assist in music learning, and
replicating this study with modifications.

1. Investigating the course content of the reading classes would determine the
extent of reading knowledge to which pre-service teachers are exposed. Subsequently,
measuring how the students would use the content would require an extensive
longitudinal study that would involve following pre-service music teachers into their first
years of teaching. Additionally, further examination of state reading levels to determine
possible connections or implications towards universities/college inclusion of a reading
course or a state mandate reading course within the music education degree program.

2. Further examination of the use of reading assessments that can be used to
assess music content. “The attempt to integrate almost always begins with a subject other
than art and teachers seldom think of reversing the process and asking how other subjects
can enhance learning in art” (Roucher & Lovano-Kerr, 1995, p. 21).

3. Examination the effects of collaborative experiences (e.g. course, workshop,
clinic) among both arts and non-arts subjects education majors on integrative practices
during clinical experiences or during the first year as practicing teachers.

4. Continued research in the area of reading integration within the music
education degree program based on the explicit connections discovered in this study.
Implementation and outcomes of an integrated program or course are best examined
through an in-depth qualitative study in order to observe the strategies in context and
practice. “Integration in its natural setting is best examined by qualitative methodologies
that involve extensive observations and immersion in the setting (Bresler, 1995, p. 32).
As a limitation for this study, it is proposed for other researchers to continue longitudinal research on how these theories and philosophies are interpreted in practice.

A concurrent push for more research on integrative approaches regarding music and reading/language arts and practical applications in the elementary setting is warranted. This study revealed several points related to reading integration and music instruction that are suitable for scholarly discussion; the inclusion of reading courses within pre-service music teacher preparation programs, music educators’ perceptions and attitudes toward reading integration, and actual practice of reading integration within general music methods courses. However, with the many general music methods courses offered at universities, the question arises: if and how do the remainder of the universities/colleges approach reading integration in the course with the pressures of adding more reading time within music instruction occurring in school districts nationwide. Reading integration within music demands an expansion of attitudes and knowledge that requires continued study and contemplation about music and music learning. It also requires extensive risk-taking in leaving the comfortable security of the known and proven method of teaching music content.

However, the [bilateral transfer] that emerged from this study provides one lens through which pre-service music education programs can consider in approaching the concept of reading integration. The approach must be strengthened and refined with further examination through extensive observations and empirical research on how or whether such transfers take place. In the meantime, it can serve to provide an alternative for music educators when faced with devoting more instructional time to reading. It can
also raise questions of how reading can serve music instruction and what implications does the inclusion of reading for the benefit of music have on the discipline.
References


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Appendix A

Perceptions and Attitudes of Reading Inclusion in Music Teacher Preparation programs.

A. Demographical Information

1. Please indicate your current position
   a. Faculty
   b. Adjunct faculty (currently teaching in a public/private school)
   c. Adjunct faculty (not currently teaching in a public/private school)
   d. Graduate assistant
   e. Other (please specify) ___________________

2. Please indicate your area of specialization (Check all that applies).
   a. Elementary (General Music)
   b. Band
   c. Choral
   d. Strings
   e. Other (please specify) ___________________

3. Please indicate your public/private school grade level teaching experience (Check all that applies).
   a. Elementary (K-5)
   b. Middle/Junior High School
   c. High School (9-12)
   d. Other (specify) ___________________

4. Please indicate number of years taught.
   a. 0-5 years
   b. 6-10 years
   c. 11-15 years
   d. 16-20 years
   e. 21 or more years

5. Please indicate the background/experiences you have in reading instruction (language arts). (Check all that apply).
   a. Professional development
   b. Conference/Workshop
   c. College Reading Course
   d. No previous background or experience

B. Questionnaire

PLEASE NOTE: The term reading is in context of language arts content not in the context of reading music.

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<th>2</th>
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204
3. I believe the degree program at this college/university prepares pre-service teachers to be knowledgeable about reading instruction issues/concerns that affect school curricula.

4. I believe music instruction has the capacity to be used to serve as a support for other academic subjects.

5. I believe music instruction should include content of other academic subjects (e.g. math, science, language arts, social studies, etc.).

6. I believe reading content should be included in general music classrooms.

7. I believe music education teacher training programs should be structured to prepare pre-service music students to support basic reading instruction in the music classroom.

8. I believe pre-service music teachers should be knowledgeable in basic reading content.

9. I feel confident teaching pre-service teachers the process of reading integration in the general music course (or course equivalent).

10. I demonstrate reading integrated experiences in the general music course (or course equivalent).

C. Request for Further Information

Are you willing to be contacted to share more in-depth information on how you include reading integrated strategies in the general music course (or course equivalent)?

_____ NO, I do not wish to share any further information

_____ YES, I wish to provide further information (Please enter an email address below).

___________________________________.

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Appendix B

Informed Consent Form

Survey

Dear Professor,

I am a candidate for the Doctorate of Philosophy degree in Music Education at the University of Memphis. I am currently completing my dissertation entitled "Preparing music pre-service teachers to enhance literacy skills in the elementary music classroom: A degree program and course content analysis" to fulfill the dissertation requirements for my degree program. The purpose of my study is to examine how NASM accredited music education degree programs from public and private universities throughout the United States address reading literacy (language arts) integration within the elementary music classroom. As part of the study, I will be conducting a survey of selected professors/instructors of the general music education course (or equivalent title) in regards to reading/language arts integration. I am writing to request your participation in this study by completing a brief confidential survey.

You are being contacted because you are listed as the instructor for the general music course (or course equivalent) at your university. If you are receiving this email and you are not the instructor of record please understand that although I have made every effort to identify the general music faculty member or the instructor who teaches the general music education course, I found it necessary at times to send this invitation to administrators or department heads of music education. If this is the case, I would greatly appreciate if you would forward this email (intact) to the instructor of record for the course. Due to the fact that you are the only one receiving this e-mail, it is imperative to forward the e-mail if you are not the instructor of the course. (The link below will remain active to the recipient of your forwarded e-mail.)

I understand your hectic schedule during this time of year; therefore your assistance is greatly appreciated. The survey consists of a brief demographic section followed by eleven questions in regards to music and reading/language arts integration and will require approximately 5-10 minutes of your time. I am also requesting the completion of the survey by Friday February 5, 2010 if at all possible.

Please accept my sincere appreciation for the time, feedback and valuable information you will contribute towards my study. If you choose to participate in this study please click on the link below that will take you directly to the survey. Once you begin, you may continue or return (from the same computer) at a later time to finish.

https://www.surveymonkey.com/s/F9VT8WH

Thank you in advance for your prompt consideration to this request. If you have any questions please do not hesitate to contact me by telephone at (901)-678-2052 or by email at smcphrsn@memphis.edu. For additional information or questions regarding
research subject's rights please feel free to call Susie Hayes, Institutional Review Board Coordinator for the Protection of Human Subjects of the University of Memphis at (901) 678-5701.

Sincerely,

Suzanne N. Hall, MEd
Doctoral Candidate
Music Education
University of Memphis
Schiedt School of Music
Dear Professor,

This is a second invitation to assist in a research study I am currently conducting for my dissertation entitled, "Preparing music pre-service teachers to enhance literacy skills in the elementary music classroom: A degree program and course content analysis". The purpose of my study is to examine how NASM accredited music education degree programs from public and private universities throughout the United States address reading literacy (language arts) integration within the elementary music classroom.

The study requires the research sample to be comprised of instructors of the general music methods course (or course equivalent). If you are not the instructor of this course, please understand that although I have tried to send this email to that faculty member directly, at times I found it difficult to identify this person. As a result, I have had to send this email to administrators and department heads in hopes that you will forward this email to the appropriate instructor.

The input on the survey will provide invaluable and pertinent information needed for the success of this study. If you have already completed the survey, please accept my sincere thanks. If not, I am requesting completion by Friday February 5, 2010, if at all possible. I have attached the direct link to the survey below for your convenience.

https://www.surveymonkey.com/s/F9VT8WH

Thank you for your assistance and I appreciate your time.

Sincerely,

Suzanne N. Hall, MEd
Doctoral Candidate
Music Education
University of Memphis
Schiedt School of Music
Dear Professor,

I am a candidate for the Doctorate of Philosophy degree in Music Education at the Rudi E. Scheidt School of Music, University of Memphis completing my dissertation entitled “Preparing music pre-service teachers to enhance literacy skills in the elementary music classroom: A degree program and course content analysis” to fulfill the degree requirements. My dissertation is organized into three phases:

- **Phase 1 (Conceptual content analysis of degree programs):** to identify which NASM accredited colleges/universities include specific literacy courses within the music education degree program.
- **Phase 2 (Survey):** to provide a “descriptive” overview of instructors’ perception and attitudes towards reading inclusion within the general music methods course.
- **Phase 3 ((Relational content analysis of course syllabi/Interviews):** to examine how reading content is address within music the general music methods course and to gather further detail on how language arts content is introduced and integrated within general music methods course (or course equivalent).

First and foremost, I would like to thank you for participating in Phase 2 of the study. According to your response you are willing to provide further detailed information about your music and reading/language arts integrative strategies that you implement in your general music methods course. This email is to formally request your participation in Phase 3 with permission to submit a copy or your general music methods course syllabus, pdf format preferred, (or course equivalent) for content analysis. Participation in the study is completely voluntary. All the information collected will be kept confidential within the limits allowed by law and will be used only for the analysis of content. Therefore, no detailed information (i.e. instructor name, university name, etc.) will be included in the dissertation. Furthermore, upon conclusion of the study, all course syllabi will be kept in a secure environment up until the period of three years and will then be destroyed. Please submit course syllabi via email to smcphrsn@memphis.edu by Friday February 19th, if at all possible. Based on the content received it may be possible that you will selected to participate in interview portion to provide clarity and more in-depth information on your integrative strategies and implementation. If you choose not to participate in this phase please indicate your request in the email sent with your syllabus attachment.

Please accept my sincere thanks for your assistance in this study thus far and I truly appreciate the information that you will contribute during this phase of the study. If you have any questions, please do not hesitate to contact me by telephone at (901) 678-2052 or by email at smcphrsn@memphis.edu. For additional information or questions regarding research subject’s rights please feel free to call Susie Hayes, Chair of the
Institutional Review Board for the Protection of Human Subjects of the University of Memphis at (901) 678-5701.

Sincerely,

Suzanne Hall  
Doctoral Candidate  
Rudi E. Schiedt School of Music  
University of Memphis
Informed Consent Form

Interview

Dear Professor:

Thank you for participating in Phase 3 (content analysis of course syllabi) of my dissertation entitled "Preparing music pre-service teachers to enhance literacy skills in the elementary music classroom: A degree program and course content analysis". The information collected from the content analysis of your general music methods course syllabus has been invaluable. As a result, I am requesting your participation in a follow-up interview to gain a more in-depth perspective of your integrative strategies discussed and/or implemented that address language arts content within general music methods course (or course equivalent).

Participation will include one forty-five minute telephone interview scheduled at your convenience during the week of March 1-5. Analysis of interview transcripts will remain confidential within the limits allowed by law however, a summary of results will be provided to you upon written request. Furthermore, any and all excerpts used in the final draft of the dissertation will include a pseudonym for participants to ensure anonymity. Upon conclusion of the study, the audio tapes and transcripts of the interview will be kept in a secure environment up until the period of three years and will then be destroyed.

Participation in this process is completely voluntary and if at any time you will like to be removed from the study please contact me via email with your request to be removed. If you choose to participate in the interview please reply to this email with your availability. The only times that I will not be available for interviews are Tuesday and Thursdays from 9-12a and Mondays from 4:30-7p, which are the times I am teaching courses.

Thank you in advance for your assistance. I truly believe that your contribution will provide important and pertinent information needed for the success of this study. If you have any questions, please do not hesitate to contact me by telephone at (407)-718-2443 or by email at smcphrsn@memphis.edu. For additional information or questions regarding research subject's rights please feel free to call Susie Hayes, Institutional Review Board Coordinator for the Protection of Human Subjects of the University of Memphis at (901) 678-5701.

Sincerely,

Suzanne Hall, MEd
Doctoral Candidate
Music Education