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The Impact of Singing-Integrated Reading Instruction on the Oral Reading Fluency and Motivation of Elementary Students in an Out-of-School Time Program

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THE IMPACT OF SINGING-INTEGRATED READING INSTRUCTION ON THE ORAL READING FLUENCY AND MOTIVATION OF ELEMENTARY STUDENTS IN AN OUT-OF-SCHOOL TIME PROGRAM

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

by

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THE IMPACT OF SINGING-INTEGRATED READING INSTRUCTION ON THE ORAL READING FLUENCY AND MOTIVATION OF ELEMENTARY STUDENTS IN AN OUT-OF-SCHOOL TIME PROGRAM

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The purpose of this study was to investigate the impact of singing-integrated reading instruction on the oral reading fluency and motivation of elementary students in an after school program. Participants were third graders ($n = 29$) who attended the singing-integrated oral reading fluency (SI ORF) intervention twice a week for eight weeks. Components of the intervention included teacher-modeling of fluent oral reading, oral support, repeated reading and singing activities from a variety of children's literature, and individual free-time.

The adapted *Elementary Reading Attitude Survey* (ERAS; McKenna & Kear, 1990) measured recreational, academic, and composite reading attitudes. The *Qualitative Reading*

Inventory – 5 (QRI-5; Leslie & Caldwell, 2011) measured the following fluency components: Word Recognition in Isolation (WRI), both Correct Automatic and Total Number Correct, Word Recognition in Context (WRC), and reading rate, calculated as Words per Minute (WPM). Pretests and posttests for components of both assessments were compared using paired-samples t – tests. Data analyses of adapted ERAS mean percentage scores revealed a statistically significant decline in recreational reading attitude, no statistically significant difference in academic reading attitude, and a decline that approached significance in participants' overall reading attitudes. QRI-5 scores revealed a statistically significant increase from pretest to posttest in WRI Correct Automatic, WRI Total Number Correct, WRC, and reading rate scores.

The after-school environment offered a viable option for SI ORF instruction and was free from restraints that can accompany high-stakes testing environments in the traditional school setting. Overall, participants were attentive and enthusiastic, particularly enjoying the singing and repeated lyrics components of the intervention.

Chapter 1

Introduction

Reading is a focal point on all educational levels and a building block for overall student achievement. In addition, increased attention has been given to oral reading fluency (ORF), as opposed to silent reading fluency, because ORF has been considered essential to reading success (Hasbrouck & Tindal, 2006). The meta-analysis of research on reading reported by the National Reading Panel (NRP; National Institute of Child Health and Human Development [NICHD], 2000) highlighted five topics: phonemic awareness, phonics instruction, comprehension, vocabulary, and reading fluency. In the report, fluency was defined as the ability "to read orally with speed, accuracy, and proper expression" (p. 11). The NRP and other researchers have defined reading fluency as a bridge that joins word decoding and comprehension (Rasinski, 2003). Fluency has since become a more significant part of many reading programs (Hasbrouck & Tindal, 2006; Kuhn & Stahl, 2003). Furthermore, fluency has been shown to be a better predictor of comprehension than direct measures of reading comprehension such as questioning and retelling (Fuchs, Fuchs, Hosp, & Jenkins, 2001). Over the past three decades research has revealed a normal decline in reading interests and positive reading attitudes as students move to higher grade levels (Dwyer & Joy, 1980; Fitzgibbons, 1997; Kirby, Ball, Geier, Parrila, & Wade-Woolley, 2011; Lazarus & Callahan, 2000). Researchers have investigated the importance of exploring methods to help stimulate the constructs of reading motivation (Anmarkrud & Bråten,

2009), reading engagement (Lynch, 2002; Putman & Walker, 2010), and reading attitude (Fitzgibbons, 1997; McKenna, Conradi, Lawrence, Jang, & Meyer, 2012; McKenna & Kear, 1990; McKenna, Kear, & Ellsworth, 1995). Fitzgibbons (1997), for example, posited, "Student attitudes toward reading are important; educators and librarians, knowing that attitudes toward reading are learned responses, need to determine types of motivation that might improve attitudes and consequently, reading behaviors and achievement" (p. 4). Similarly, in his study of struggling adolescent readers, Lynch (2002) emphasized the importance of schools in helping students become engaged in their learning as a means towards experiencing academic success.

To foster student and teacher creativity in the area of reading acquisition, music-integrated (MI) instruction has offered viable alternatives to traditional reading instruction (Gromko, 2005; Rasinski, Padak, McKeon, Wilfong, Friedauer, & Heim, 2005). Researchers have argued that using singing to teach reading has merit because song lyrics contain elements of reading comprehension and practice for visual decoding, partly because songs often allow for repetition (Standley, 2008). Even in the field of music education, some educators support the idea that interdisciplinary connections between music and reading can contribute to the improvement of reading skills (Cutietta, 1996). The results of a meta-analysis of 25 correlational studies were consistent with the interpretation that music study enhances reading ability; however, the findings did not allow for causality (Butzlaff, 2000).

Statement of the Problem

The concept of MI instruction and its effects on reading fluency is not a new educational phenomenon. In fact, the National Standards for Music Education, a subset of the National Standards for Arts Education under the Goals 2000 Act (Mark, 2002), were part of a research paradigm that included perspectives and roles of music education, national interest in educational

accountability, and research focusing on the correlation between music skills and higher achievement in music and other disciplines (Kay, 2000). Turning national standards into effective instructional approaches has been a theme of global concern (Denac, 2009; Kay, 2000). Results of Standley's (2008) meta-analysis of 30 studies, for example, indicated that music interventions generally had a significant and positive effect on the teaching of reading skills. Gaps undoubtedly exist in the literature, as well. Many of the studies, for example, were not specific to singing-integrated instruction, and although general reading achievement was most often the dependent variable, reading fluency was not a specific targeted reading skill. The meta-analysis also showed that larger studies were less controlled due to multiple teachers being in charge of the music condition and smaller sample sizes tended to be more controlled due to single teachers being in charge of the music condition. Findings suggested that music-based reading interventions should be designed with embedded reading skills, including pairing of alphabet recognition with phonetic patterns, practicing word segmentation and sound blending, increasing decoding speed, and always fading out the music component during the assessment process (Standley, 2008).

Music and reading connections have been examined by a number of researchers (Anvari, Trainor, Woodside, & Levy, 2002; Hall & Robinson, 2012; Wiggins, 2007). Hall and Robinson (2012) examined shared terminology, learning processes, and instructional strategies between music and reading instruction. In response to mandates that challenged music teachers to either shorten music instruction time or combine instructional strategies of music and reading into their classroom activities, these researchers explored ways to enhance music teachers' perceptions of music and reading connections and ways to assist them with reading processes and instructional practices that mirror music learning processes and instructional practices. They noted that the

fluency construct of reading quickly, accurately, and with expression applies to reading text and reading music and that both music and text are read directionally from left to right.

The passing of the No Child Left Behind [NCLB] Act (U.S. Department of Education, 2001) made testing mandatory, assigned indicators of school and student accountability, and attached high stakes to test results (Hamilton, Stecher, & Klein, 2002). Subsequently, a number of district mandates increased instructional time in such tested subjects as English and mathematics (Persellin, 2007). Instructional time was often flooded with highly prescriptive, narrowly-focused models of instruction which became both the norm and the pathway by which administrators and teachers sought to drive positive results on standardized assessments (Camp & Aldridge, 2007). In addition, the Council for Basic Education (von Zastrow & Janc, 2004) reported that 71% of the nation's fifteen thousand school districts had reduced instructional time in music, history, and other non-tested subjects. During the past twenty years, in particular, accountability and testing in schools have been causes of concern for arts educators because of fears that schools will feel pressured to divert instructional time toward tested areas of the curriculum and away from untested subjects such as music, visual arts, and theatre (Mishook & Kornhaber, 2006; Persellin, 2007). Persellin (2007), for example, found that some schools completely cut untested subjects from the curriculum to create even more time for tested subjects.

The rationale for test-based accountability systems has been compelling for many policymakers and business leaders (Hamilton et al., 2002). Proponents argued that test-based accountability was important because test scores help to inform teachers of students who are and are not performing well and that the rewards and sanctions attached to the tests served as motivating factors for both teachers and principals to focus on instruction of tested subjects

(Hamilton et al., 2002). Opponents claimed that teachers often struggle with political demands for test-based accountability (Hess, Wurtzel, & Rotberg, 2002; Sirotnik, 2004), energized most prominently by NCLB (Au, 2009).

From preschool through high school, students and teachers have felt the negative effects of accountability on music and art programs (Gerber & Gerrity, 2007; Persellin, 2007). Gerber and Gerrity (2007), for example, claimed that instructional time in the arts is often reallocated to other subjects; that music, art, and theater programs are often allotted a shorter instructional period; and that some general music classes have been eliminated altogether. Similarly, Persellin (2007), in a study of challenges to early childhood music education in the United States, argued that even preschools have felt pressure to accelerate learning to allocate more time to prepare young children for elementary high-stakes testing by taking time away from preschool music instruction.

Rationale for the Study

Among the most important indicators of student achievement on standardized tests are those assessing literacy skills (Cimetta, D'Agostino, & Levin, 2010; Dockrell, Lindsay, & Palikara, 2011; Ladnier-Hicks, McNeese, & Johnson, 2010; Shin, Slater, & Backhoff, 2013). Nationally, standardized assessments such as the Scholastic Aptitude Test (SAT) and the American College Test (ACT), both of which have been used to predict college grade point averages, have emphasized reading and writing skills at the secondary level (Cimetta et al., 2010; Kobrin, Deng, & Shaw, 2011). On the elementary level, federal literacy programs such as *Reading First* (Gamse, Jacob, Horst, Boulay, & Unlu, 2008) have focused on increased instructional time and annual score increases (Otaiba et al., 2008). In many cases, the priority to make schools legally accountable has taken precedence over the creative and innovative

educational needs of students, thus creating the potential for draining teacher and student creativity and autonomy (Crocco & Costigan, 2007). Increased attention, for example, has been given to instructional methodologies and assessments that emphasize early literacy achievement (Barone, 2013; Bingham & Patton-Terry, 2013).   In addition, reports of test results to state agencies and local media coverage of individual school scores have sometimes been viewed as policymakers' means of enforcing accountability (Carson-Meyers, Bryant, Thomas, & Brinson, 2005) and have become types of coercive forces that thrive to pressure teachers with threats and punishment rather than nurture them with encouragement and support for educational improvement (Hess et al., 2002; Sirotnik, 2004). Many of these pressures have suppressed teacher morale, contributed to student retention and dropout rates, narrowed the curriculum, and grown in opposition to what is known about good teaching and learning practices (Sirotnik, 2004).

Statement of Purpose

In 2000, the National Reading Panel (NICHD) reported that fluency should be a key component of effective instruction; that oral reading should be used to assess students' development in word recognition and fluency (two critical elements in overall reading success); and that the lack of reading fluency is a significant contributor to children's reading difficulties. The NRP also concluded that guided repeated oral reading (GROR) "had a significant and positive impact on word recognition, fluency, and comprehension across a range of grade levels" (p. 12). More than a decade later, the National Assessment of Educational Progress (NAEP; National Center for Education Statistics [NCES], 2013), reported that the average reading comprehension score for fourth graders did not change significantly from 2011 to 2013. Reading fluency is often seen as a bridge to reading comprehension (NICHD, 2000; Rasinski, 2003), and

research has shown that singing-integrated (SI) instruction can have a positive effect on reading (Standley, 2008). The purpose of this study is to investigate the impact of SI instruction, with GROR as a major instructional strategy, on the oral reading fluency and motivation of third-grade students in a metropolitan after-school program.

Brief Review of Literature

The NRP (NICHD, 2000) estimated that approximately 20% of young children experience reading problems before third grade, a strong indication that acquiring basic reading skills can be a struggle for many young students (Reynolds, Wheldall, & Madelaine, 2011). In the United States, fluent reading has been an important goal of reading instruction for decades and continues to be a critical indicator of successful reading acquisition (Allington, 1977, 1983; NICHD, 2000). Reading fluency has largely been defined by and was once measured solely in terms of how it was most often assessed – by reading rate (i.e., the number of words a reader can read on grade level text in one minute; Rasinski, 2012). The limited definition stems in part from studies that have shown high correlations between reading rate and reading comprehension, thus, often defining reading fluency simply as a quest for speed (Rasinski, 2012).

In 2000, the NRP referred to fluency as a neglected aspect of reading (NICHD, 2000), and thus included fluency as one of five critical reading components (Pikulski & Chard, 2005). Fluency has since become a more essential part of many reading programs (Kuhn & Stahl, 2003; NICHD, 2000). The NRP (NICHD, 2000) defined fluency as "the ability to read text quickly, accurately, and with proper expression" (pp. 3-5). According to Pikulski and Chard (2005), definitions of fluency that highlight its relationship to expression, and hence, its oral aspect, may be part of the reason why fluency has not historically received much attention, especially when compared with silent reading comprehension. Moreover, prior to the publication of the report of

the NRP (NICHD, 2000), some researchers argued for superior comprehension from silent reading by struggling readers due to the often difficult pronunciation, interpretation, and intonation faced when reading aloud (Miller & Smith, 1990; Rowell, 1976).

Due to researchers having advocated for the use of ORF as an indicator of reading competence in elementary school students for over ten years (Fuchs et al., 2001; Good, Simmons, & Kame'enui, 2000), the focus of this study was the elementary population, specifically third grade. ORF is an essential outcome of early reading instruction and has gained considerable attention as a powerful predictor of school success at all levels (Salvador, Schoeneberger, Tingle, & Algozzine, 2012). Salvador et al. (2012) investigated relationships between second grade oral reading fluency scores and third-grade end-of-grade reading achievement scores for students ($N = 9,562$). Results showed that oral reading fluency scores and reading comprehension scores were moderately correlated, with oral reading fluency being the strongest predictor of subsequent achievement. In addition, research has shown that one aspect of oral reading – repeated readings – increases fluency (LaBerge & Samuels, 1974; O'Shea, Sindelar, & O'Shea, 1985; Therrien, 2004). Building upon repeated readings, Kuhn and Stahl's (2003) research showed that having adults guide repeated reading methods helps to improve fluency.

Comprehension of challenging text requires both cognition and motivation (Anmarkrud & Bråten, 2009). In their study of 104 Norwegian ninth grade students, these researchers found that the value students assigned to the task of reading was a predictor of reading comprehension, whereas the relationship between reading efficacy and reading comprehension did not show statistical significance. These findings suggested that students were motivated to read because they valued the task of reading. Although reading comprehension is not the focus of the current

study, the dual abilities of word recognition and comprehending are essential components of reading, and are necessary skills for academic success.

Mizner (2008) explored the idea that reading fluency could be reinforced through music pitch awareness, rhythm, and dynamics. Several researchers have investigated relationships between music instruction and reading achievement (Gromko, 2005; Kinney, 2008; Kouri & Telander, 2008; Mizener, 2008; Schön et al., 2008). Based on studies of researchers from the late 1990s that showed that the development of phonemic awareness could be enhanced by fluency across symbol systems, Gromko (2005) predicted that music could be used as a way to enhance reading comprehension by having children read print while singing, thus, suggesting that phonemic awareness may be the mechanism that explains the relationship of music instruction to reading skill.

Kouri and Telander (2008) asserted that a growing number of reading professionals have advocated teaching literacy through music and song. Standley's (2008) meta-analysis of music-integrated (MI) reading research highlighted music studies that incorporated specific reading skills. When the music component was used to reinforce reading behavior, results were positive. Moreover, Bolduc's (2008) review of literature cited five correlational and eight quasi-experimental studies documenting some relationship between music and emergent literacy capacity among children. Additionally, researchers have found that real-time music pitch recognition (singing) significantly correlates with reading ability (Biggs, Homan, Dedrick, Minick, & Rasinski, 2008). Specific singing-integrated (SI) strategies may also enhance reading motivation (Towell, 1999/2000). Towell discussed several evidence-based teaching ideas that focus on motivating students to read through the use of music, including the use of songs:

"Children can be motivated to learn to read by reading the words of popular songs as portrayed in picture books" (p. 284).

Time within the school day to implement such strategies began to be blocked due to high-stakes testing and the accountability movement in education (Au, 2009). Research suggests that the accountability movement in education began a cycle of increased instructional time being given to tested subjects in schools nationwide (Hess et al., 2002; Sirotnik, 2004). Moreover, researchers also believe that accountability in schools has become a coercive force that thrives to pressure teachers with threats and punishment rather than support them with encouragement and advocacy for educational improvement (Hess et al., 2002; Sirotnik, 2004).

In many ways, the groundwork for the current state of education reform was laid, in part, by a series of legislative initiatives and partnerships at both the state and national levels. The publication of *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education [NCEE], 1983) established a foundation for the high-stakes testing and accountability movement (Au, 2009; Hamilton, 2003). Fueled by NCLB (U.S. Department of Education, 2001), the enactment of penalties imposed on districts that failed to meet prescribed benchmarks has resulted in an increase in district mandates that increase instructional time in tested subjects (Persellin, 2007) and completely cut untested subjects in some schools (Smith, 2008). Au (2009) argued that the priority to make schools accountable has overridden the true educational needs of students. One way to meet these needs may be through out-of-school time (OST) instruction.

After-school and summer school are the most common out-of-school times during which OST programs are delivered (Lauer et al., 2006). Under provisions of NCLB (U.S. Department of Education, 2001), states must provide supplementary education services outside the regular

school day to low-income students in Title 1 schools that fail to help all children reach proficiency in reading and mathematics (Muñoz, Potter, & Ross, 2008). In addition, Lauer et al. (2006) conducted a meta-analysis of 35 peer-reviewed studies to estimate effect size of OST tutoring programs for at-risk students and found a large and statistically significant effect size for programs such as tutoring in reading.

Research Questions and Methodology

The goal of reading fluency, the act of singing, and the theoretical construct of motivation provide the conceptual framework for this study. The study was designed to answer the following research questions:

1.   What is the impact of singing-integrated oral reading fluency instruction on the reading motivation of elementary students attending a metropolitan after-school program?

2.   What is the impact of singing-integrated oral reading fluency instruction on the oral reading fluency scores of elementary students attending a metropolitan after-school program?

To answer these questions, a single-group pretest-posttest design was utilized. Quantitative research identified the effects of SI ORF instruction on reading motivation and oral reading fluency. Students in an after-school program at two locations in a metropolitan community in Central Virginia participated in the study. For reading motivation, the measurement was the adapted *Elementary Reading Attitude Survey* (ERAS; McKenna & Kear, 1990). Quantitative data for assessing oral reading fluency was collected via the *Qualitative Reading Inventory – 5* (QRI-5; Leslie & Caldwell, 2011).

Findings and Conclusions

Data analyses of the adapted ERAS (McKenna & Kear, 1990) scores revealed a statistically significance pretest to posttest decline for participants' recreational reading attitude, no statistically significant difference in academic reading attitude, and a decline that approached significance in participants' overall reading attitudes. QRI-5 (Leslie & Caldwell, 2011) scores revealed a statistically significant increase in WRI Correct Automatic, WRI Total Number Correct, WRC, and reading rate scores, as calculated in WPM, in all areas from pretest to posttest.

During the time period in which the ERAS (McKenna & Kear, 1990) posttest was administered, all participants were engaged in reading benchmark tests at their respective schools before coming to the after-school program. On benchmark testing days, several participants had expressed regret at having to take the ERAS posttest. Their display of negativity may have manifested in the decline of their recreational reading attitude scores. Their ORF scores across all components, however, showed a statistically significant positive increase which indicates that the SI ORF intervention can be used to improve students' oral reading fluency.

Summary

Although recreational reading attitude scores decreased, students were excited most days to take part in the intervention. They especially enjoyed teacher-modeling of singing and reading, partnering with others to sing and read, and the repetition of engaging lyrics. The content of lyrics used included sports, family time, and humorous school-related scenarios with which participants could relate. Students would benefit from SI ORF instruction by music teachers and classroom teachers collaborating in efforts to design and execute a SI ORF curriculum.

Chapter 2

Review of the Literature

Method of Review of the Literature

The search strategies for this review of the literature involved electronic and reference searches. Searches were conducted through electronic databases including ERIC, EBSCO Host, Academic Search Complete, the Arts Based Educational Research Special Interest Group of the American Education Research Association (AERA), JSTOR, ArtsEdResearch, ArtScan, the National Association for Music Education (formerly MENC), and PsycINFO. Combinations of key words were used in each search database in effort to find the most relevant sources for this study. Initial key words included *reading, readers, reading fluency, reading acquisition, reading instruction, reading attitude, reading motivation, arts-integration, guided reading, music, reading assessment,* and *reading instruction*. Sources related to these key words yielded approximately 550 references. Additional more specific key words were included in conjunction with the terms above in efforts to narrow the search results to the parameters of this study. These key words included *elementary, singing, songs, arts-integration education, oral reading fluency, out-of-school time, fluency instruction, literacy, music integration, after-school, guided repeated oral reading, choral reading,* and *third grade*. Sources related to these specific key words yielded approximately 383 references. Searches using combinations of the above key words were utilized in Google Scholar to broaden the types of documents being selected, producing

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approximately ten references, including articles, white papers, and government documents. References involving reading fluency instruction in middle school were vetted due to comparable variables being used. The current study focused on elementary oral reading fluency instruction that combined singing with repeated reading. Resources for elementary fluency instruction with a singing component were limited, and thus, had to be expanded to include studies with middle school populations.

After reviewing tables of contents, indices, and abstracts, and after determining relevance to this study and applying the standards of the American Educational Research Association (AERA), the National Reading Panel (NRP), and the National Association for Music Education, 188 journal articles, 10 books, two conference presentations, three education websites, seven online books, and 15 U.S. government documents were deemed appropriate for this review.

Introduction

Reading and reading comprehension are important life skills that are necessary in a variety of tasks and everyday activities. Freire (1983) described learning to read as one aspect of the act of knowing and as a creative act. To be prepared for these life skills, reading is a necessity for student achievement. Scientifically-based research is often targeted by school administrators in their search for instructional models of reading achievement and for student learning in general. Literature supports the idea that music aids general cognitive development (Rauscher et al., 1997; Rauscher & Zupan, 2000) and reading skills in particular (Standley, 2008). In the Report of the NRP (NICHD, 2000), fluency is identified as one of the essential components of reading instruction necessary for reading comprehension and one that is often neglected in the classroom.

Definitions of Fluency. The NRP (NICHD, 2000) associated fluency primarily with oral reading done mostly in the primary grades and not with silent reading (Rasinski, Homan & Biggs, 2009). The NRP's historical report of the definition of fluency revealed that within the last thirty years, as iterated by LaBerge and Samuels (1974), automatic information processing in reading focused on fluency as word recognition, with a similar definition given in *The Literacy Dictionary* (Harris & Hodges, 1995). Further research, however, has extended its definition to include the ability to group words appropriately into meaningful grammatical units for interpretation, thus enabling reading comprehension by freeing an individual's cognitive resources for interpretation (NICHD, 2000).

Oral reading fluency was once characterized solely by fast and accurate word recognition (Miller & Schwanenflugel, 2006), measured by reading rate, and largely defined in terms of how it has most often been assessed – also by reading rate (Rasinski, 2012). To address the idea of automaticity, Moors and DeHouwer (2006) identified its four properties: speed, effortlessness, autonomy, and lack of conscious awareness. The NRP (NICHD, 2000) defined automaticity as "the processing of complex information that ordinarily requires long periods of training before the behavior can be executed with little effort or attention" (p. 7). Young and Rasinski (2009) offered a similar definition: "Automaticity refers to the ability of proficient readers to read the words in a text correctly and effortlessly so that they may use their finite cognitive resources to attend to meaning while reading" (p. 4). Their definition is in response to the goal of fluency instruction for many - to increase reading rate. Using reading rate as a fluency measure, however, has led many to use fluency instructional approaches that focus primarily on increasing reading rate and not on comprehension of text (Rasinski, 2006). As later explained by Rasinski (2012), the limited definition stems in part from studies that have shown high correlations

between reading rate and reading comprehension; thus, he states, "As a result, reading fluency instruction has become in many classrooms a quest for speed" (p. 516).

Over the last 30 years, the meaning of fluency in reading acquisition has changed and grown to include not only speed and accuracy of word recognition (Miller & Schwanenflugel, 2006), but also automaticity and prosody. The NRP (NICHD, 2000) defined fluent reading as reading text with speed, accuracy, and proper expression. Rasinski (2004) referred to reading fluency as the reader's ability to develop control over surface-level text processing for the purpose of focusing on the deeper meaning embedded in text. Rasinski et al. (2009) continued to qualify fluency as an act of reading with and for meaning. Young and Rasinski (2009) agreed that most literacy scholars define fluency as the ability to read with sufficient accuracy, automaticity, and prosody, which lead to good comprehension (Rasinski, 2006). Since the NRP's report, new theoretical perspectives on the roles of automaticity and prosody in fluency have emerged (Kuhn, Schwanenflugel, Meisinger, Levy, & Rasinski, 2010; Kuhn, Schwanenflugel, Morris, et al., 2006; Benjamin & Schwanenflugel, 2010). According to Miller and Schwanenflugel (2006), prosody can be achieved when a child can segment text according to major syntactic and semantic elements. Rasinski (2012) defined prosody as reading with expression in the effort to enhance and add meaning to text. Pause length (Schwanenflugel, et al., 2004) and pitch variability (Dowhower, 1987) have also been found to be prosodic features. As Rasinski (2012) describes prosody, "If automaticity is the fluency link to word recognition, prosody completes the bridge by linking fluency to comprehension" (p. 519); in other words, fluency is regarded as a bridge between decoding words and comprehension (Fuchs et al., 2001). The NRP (NICHD, 2000) advised teachers to recognize that word recognition accuracy alone

does not completely define fluency, that reading comprehension may be aided by fluency, and that teachers should assess fluency regularly.

The Role of Oral Reading Fluency in Reading Acquisition

The dual abilities of reading and comprehending are necessary skills for academic success in all disciplines and for success in life (Miller & Schwanenflugel, 2006). Furthermore, oral reading fluency (ORF) is an essential life-long skill because studies have shown a link between ORF and reading comprehension (Kuhn & Stahl, 2003; LaBerge & Samuels, 1974; NICHD, 2000; Rasinski et al., 2005). Among the most important indicators of student achievement on standardized tests are those assessing literacy skills.

The NAEP (NCES, 2013) is the largest nationally representative and continuing assessment (administered uniformly across the country) of what America's students know and what they can do in reading, science, writing, the arts, civics, economics, geography, U.S. history and in Technology and Engineering Literacy. Main NAEP assessments track student academic performance in grades 4, 8, and 12. The NAEP's long-term trend assessments of students in these grades have been collected, tracked, and reported since the 1970s. The information gathered by NAEP is distributed in the form of the *Nation's Report Card*™ (NCES, 2013). The most current NAEP (NCES, 2013) main reading assessments showed that fourth graders scored higher in reading than in all previous assessments except those in 2011. The assessment results also revealed that 35% or more of fourth and eighth graders performed at or above the Proficient level in mathematics and reading (NCES, 2013).

NCES (2005) conducted a study that focused on the status of fluency achievement in American education, and it examined the reading accuracy, rate, and fluency of a nationally representative sample of fourth graders. According to the study, the accuracy component

measured the child's precision in orally reading the words in the text and was measured as a percentage of words read correctly. Rate referred to the read-aloud speed of the number of words per minute for both the initial minute of oral reading and for the entire oral reading assessment. Reading fluency was defined as the rating of the ability of the student to render an appropriately phrased and syntactically coherent delivery of the reading passage. Results of the study showed that 44% of students were not fluent with grade-level stories that they had read under supportive testing conditions. In addition, a close relationship was found between fluency and reading comprehension.

Students who demonstrate problems with fluency are not limited to students with learning disabilities, and it was once believed that these students came primarily from socio-economically disadvantaged homes with few books and limited parent participation (Adams, 1990). Lack of literacy experiences in the home do contribute to reading difficulties for many students; however, numerous children with vigorous learning experiences, average or above-average aptitude, and early immersion in literacy activities may also have difficulties developing fluency in reading (Adams, 1990; Lyon, 1998). Factors known to contribute to the development of reading fluency include strong early literacy skills (Flowers, Meyer, Lovato, Wood, & Felton, 2001), extended opportunities for reading practice (Kuhn & Stahl, 2003; Topping, Samuels, & Paul, 2007), and targeted instruction designed to enhance reading fluency (Chard, Vaughn, & Tyler, 2002).

Reading Fluency Instruction

Reading fluency has been identified as a vital component in effective literacy instruction and is important for reading because it bridges word recognition and comprehension (Kuhn & Stahl, 2003; NICHD, 2000; Rasinski & Hoffman, 2003). The NRP report (NICHD, 2000) reviewed changing fluency concepts to consider the effectiveness of two major instructional

approaches to fluency development and the readiness of both approaches for classroom use. The first approach considered repeated oral reading practice or guided repeated oral reading practice. The second approach included efforts to increase children's engagement of independent or recreational reading. Results of the analysis of studies on the development of fluency showed that guided repeated oral reading procedures are effective in improving reading fluency and overall reading achievement. Results of the meta-analysis of guided oral reading procedures showed a moderate impact on reading achievement and that repeated reading procedures had an impact on the reading ability of non-impaired readers through at least grade 4 and struggling readers throughout high school. The data also provided strong support for guided oral reading strategies as effective in improving reading when compared with the lack of demonstrated effectiveness of independent silent reading strategies. Few studies were found that examined the impact of recreational reading on reading fluency.

Reading fluency instruction, often referred to as fluency-oriented reading instruction (FORI; Rasinski, 2003), has been shown to lead to improvements in reading achievement, specifically reading comprehension (Rasinski, Samuels, Hiebert, Petscher, & Feller, 2011). The recognized correlation between fluent reading and comprehension highlights its importance in students' long-term academic performance (Fuchs et al., 2001; Miller & Schwanenflugel, 2006). FORI can include repeated readings and assisted reading activities (Rasinski, 2003). Both are types of oral reading activities, as opposed to silent reading activities.

Silent reading has been generally accepted as the primary goal of reading instruction since the early twentieth century (Stayter & Allington, 1991). Furthermore, subsequent research has focused on fluent oral readers who are also fluent silent readers (Reutzel, Jones, Fawson, & Smith, 2008). Young and Rasinski (2009) suggested that "Research has demonstrated a strong

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connection between prosodic oral reading and proficient silent reading comprehension" (p. 4).

Critics, for example, have often contended that more adults read silently in their daily lives than aloud, thereby encouraging teachers to be more interested in moving students as quickly as possible into silent reading (Rasinski, 2003). With the publication of the NRP (NICHD, 2000) and other fluency research (Kuhn & Stahl, 2003; Rasinski & Hoffman, 2003; Stahl & Kuhn, 2002) oral reading fluency has surfaced as an important factor in reading instruction. However, nearly two decades prior to the NRP's (NICHD, 2000) report on reading, Taylor and Connor (1982) explained the importance of oral reading instruction by suggesting that children in primary grades need to hear themselves read and receive adult reader feedback as a way of monitoring their progress. Rasinski's (2012) report on reading fluency highlighted the importance of automaticity and prosody as achieved through repeated readings, teacher-guided reading, and repeated singing as forms of fluency instruction, similar to several methods for capturing fluency defined by Richards (2000). Three salient methods for the current study are repeated reading, choral reading, and modeling.

 Repeated reading. Oral reading instruction has been labeled a necessity in school because of its regular use in the classroom for reading stories, reciting poetry, giving speeches, singing songs, and shouting cheers (Rasinski, 2003). For every study that recommends oral reading as a more viable instructional method than silent reading, however, there is another, equally well-documented study challenging such conclusions or offering different perspectives, or combinations of both. Pinnell et al. (1995), for example, explored reading fluency and found associations between oral reading fluency (ORF) and silent reading comprehension. Rasinski (2012) suggested that reading aloud repeatedly helps fluency (accuracy and speed) and comprehension (Rasinski, 2012). Furthermore, LaBerge and Samuels (1974) argued that the

theory of automaticity or automatic information processing supports the repeated reading construct because repeated reading provides the practice necessary to read automatically. When a reader reads with automaticity, decoding text is automatic, leaving attention free to be used for comprehension (Samuels, 1979). Samuels (1979) identified two strategies that teachers can employ to help students achieve automaticity in word recognition: (1) instruct students on how to recognize words at the accuracy level, and (2) provide time and motivation so that students can practice these word recognition skills until they become automatic.

Repeated readings have been the focus of a number of reading fluency intervention programs (Rasinski, 2012; Therrien & Kubina, 2006). Rasinski's (2012) research on fluency and repeated readings emphasized the notion that what students learn from repeated reading of one passage partially transfers to a new passage. Moreover, several studies have indicated that word recognition accuracy, automaticity, comprehension, and attitude toward reading have been shown to improve with repeated readings (Dowhower, 1994; Kuhn & Stahl, 2003; Rasinski et al., 2011). Rasinski et al. (2011), for example, examined the effects of a computer-based silent reading fluency instructional system on the reading comprehension and reading achievement of urban students. Results showed that the program yielded positive, substantial, and significant improvements in reading comprehension and reading achievement for fourth- through tenth-grade students.

Rasinski (2012) argued, "A reading performance provides the authentic reason for repeated reading" (p. 520), partly because poetry readers, actors, and singers rehearse their readings multiple times in efforts to provide meaningful and satisfying performances for their audiences. Thus, songs lend themselves to performance, thereby fostering repeated readings with an authentic purpose. Many children's songs allow for repetition, and texts for repeated

reading often include childhood songs with familiar lyrics. Samuels (1979) investigated historical examples of early instruction using repeated reading, and found that children in these instances were introduced to reading with material which was already known to them aurally, and were then instructed in reading and rereading the material until the words were read with some degree of fluency. Researchers have argued that students improve in their reading performance when their instruction is combined with repeated reading activities (Hasbrouck, Ihnot, & Rogers, 1999; Rasinski, 1990). Repeated reading can lead to significant increases in fluency, and oral repeated reading, in particular, can provide intonation and sensory cues that enhance phrasing (Rasinski, 2003). The theory of automaticity supports repeated reading's ability to help with fluency (accuracy, speed) and comprehension of text (LaBerge & Samuels, 1974).

Choral reading. The use of choral reading as an instructional strategy to improve reading fluency is common (O'Shea, McQuiston, & McCollin, 2009). In fact, whole-class choral reading (WCCR) teaching methods have been used successfully in urban schools with low-income African American students (Paige, 2011). Other benefits of incorporating choral reading in the classroom include enhancing teamwork and improvement of the thinking power of the team or group (Trousdale, Bach, & Willis, 2010). Allowing students to sing as a group has been shown to promote engagement in the task, because singing is often performed chorally and lends itself to authentic repeated readings (Rasinski, 2012).,

Modeling. Teacher-modeling of fluent reading is important in the classroom, because modeling fluency helps students identify fluency as the goal of oral reading (Allington, 1983). Zutell and Rasinski (1991) explained that poor readers often have only other poor readers to

model due to classroom organization of reading groups. Listening to expressive fluent reading during reading instruction is paramount for every student (Richards, 2000).

Music and Literacy Connections

Children sing songs and speak their native language before they read song lyrics and read their native language in print (Liperote, 2006). According to Trinick, Sauni, & Allen (2010), children fluidly practice syntax and semantics through the repetition of familiar words sung rhythmically more so than with words alone. Books for primary readers are designed to help children's memory and retention in the early stages of reading, and songs that are similarly designed for young children share some of the same features: rhythm, rhyme, repetition, and refrain (Trinick, 2012). Trinick analyzed existing theory on the use of song lyrics as shared reading text, the intentional application of songs as meaningful and engaging contexts for learning, and the purposeful application of song to literacy programs. As a proponent for the dissemination of research findings to teachers, Trinick (2012) concluded that such claims would be strengthened by integrating research-based literature on affective, cognitive, linguistic, and cultural benefits of song use in the classroom.

Teacher-modeling can be found in both music and literacy domains. Shinichi Suzuki, for example, was a proponent of rote learning before reading, a method called the Mother Tongue Approach, in which babies initially listen to music and hear their native language before reading music and reading their native language (Liperote, 2006). The Suzuki Method is preferred by teachers who seek high-level performing skills in their music students, and it exposes children to high-quality modeling of musical selections and frequent praise (Liperote, 2006). Liperote (2006) further explained that toddlers learn their native language by first hearing spoken examples of that language and by receiving verbal praise. In the same way, Suzuki students

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listen to musical examples played on their instrument of instruction and mimic what they hear through repeated trials and with verbal praise for their efforts. Reading the music comes after success with learning to play by rote listening.

Liperote (2006) posited that music and language share a similar learning process in what she outlined as the four vocabularies that describe both: listening, speaking, reading, and writing. The study focused on teaching students how to read music by first engaging them in speaking vocabularies and music listening activities. Furthermore, Liperote (2006) described these concepts as being based on foundations of language building because just as children listen for almost one year before their speaking vocabulary emerges; they then acquire four to five years of considerable listening and speaking vocabularies before being asked to read in school. According to this study, the transition to reading words comes more naturally for those children with rich listening and speaking vocabularies (Liperote, 2006).

Some researchers argue that music in collaboration with other disciplines compromises music for its own sake (Bartel, 2004; Cane, 2009). Bartel (2004) contended that if music is separated from its expressive function and aesthetic quality, then it does not have anything to contribute to educating children. Furthermore, Cane (2009) suggested that the arts, in general, should not be treated as a strategy for demonstrating learning in other learning areas, but as another way to learn. Other researchers, however, have argued that music has value in its ability to enrich existing literacy programs (Patel, 2008).

Within the past ten years, a variety of integrative music and reading methods have surfaced to support claims of the reading achievement benefits of integration. Several researchers, for example, have investigated relationships between music instruction and reading achievement (Gromko, 2005; Kinney, 2008; Kouri & Telander, 2008; Mizener, 2008; Register,

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Darrow, Standley, & Swedberg, 2007; Schön et al., 2008). Based on studies of researchers from the late 1990s, Gromko (2005), for example, investigated music as a way of enhancing reading comprehension by having children read print while singing, thus suggesting that phonemic awareness may be the mechanism that explains the relationship of music instruction to reading skill. Her meta-analysis was based on studies that showed that the development of phonemic awareness could be enhanced by fluency across such symbol systems as music and reading. She predicted that music instruction that taught children how to analyze songs into patterns would also enhance their ability to segment words into phonemes. Similarly, Darrow et al. (2007) argued that music and reading embody such parallel skills as phonological awareness, phonemic awareness, sight identification, orthographic awareness, cuing systems awareness, and fluency.

There are several ways in which music, specifically singing, has been used as an instructional reading strategy (Biggs et al., 2008; Rasinski, 2003). Much of the literature, however, identifies singing-based instructional literacy strategies that enhance reading achievement or reading development for emergent English Language Learners (ELLs), or struggling middle school readers (Biggs et al., 2008; Gromko, 2005; Kinney, 2008; Kouri & Telander, 2008; Lynch, 2002; Mizener, 2008; Paquette & Rieg, 2008; Schön et al., 2008). The current study will provide singing-based reading fluency instruction to elementary students in third grade.

Several researchers have examined relationships between music, music instruction, and literacy (Gromko, 2005; Khouri & Telander, 2008; Liperote, 2006; Mizener, 2008). Mizener (2008), for example, explored the enhancement of language skills through music. Her study gave detailed narratives of student's rhythmic activities and how these activities related to phonological awareness, phonemic awareness, orthographic awareness, sight identification, and

fluency. Niland (2009) identified examples of innovative instructional reading practices, namely turning picture book refrains into songs and improvising traditional children's tunes. She further explored the importance of adding a musical component to stories and a narrative dimension to songs, thus addressing reading fluency through the medium of music.

In her research on music instruction and its connection to reading ability, Gromko (2005) found that music instruction that develops aural perception teaches children to divide a song into its unique patterns or music phrases. Her study highlighted the connection between music notes and words, describing music notes as primary symbols used in music instruction, with each note of a song corresponding to a word segment or syllable. The purpose of Gromko's (2005) study with over one hundred kindergarten students was to test the near-transfer hypothesis that music instruction that develops aural perception would lead to significant gains in the development of phoneme-segmentation fluency. Gromko (2005) tested the hypothesis that fluency across symbol systems could be achieved by music instruction that taught children to analyze a simple song into its patterns. Results revealed that students who received music instruction showed significantly greater gains in phoneme-segmentation fluency than those who did not receive music instruction.

The ability to hear and respond to sound in language and in music is a function of auditory processing that also relates to singing (O'Herron & Siebenaler, 2007). The distinction of pitches, sound duration, phonemes, and inflections are elements present in both areas. Music and speech both involve a combination of elements such as notes and phonemes that under a specific set of music theory and grammar rules, can generate meaningful phrases (Jackendoff & Lerdahl, 1983). Lamb and Gregory (1993) argued that auditory analysis skills, such as blending

and segmenting sounds found in language processing, are similar to skills needed for music perception, namely, rhythmic, melodic and harmonic discrimination.

Singing and Reading Acquisition

Music instruction that develops aural perception teaches children to divide a song into its unique patterns or music phrases (Gromko, 2005). Aural perception involves listening to music, and combining listening with simultaneous visualization of song lyrics can reinforce this perception. In the study of music, for example, music notes are the primary symbols used, with each note of a song corresponding to a word segment or syllable. Before singing music lyrics with the written words, experiencing a song aurally and singing it from the memory creates a strong foundation for eventual reading success (Liperote, 2006).

In 2008, several studies regarding relationships between music and literacy emerged. Kouri and Telander (2008) asserted that a growing number of reading professionals have advocated teaching literacy through music and song. Standley (2008), in a meta-analysis of MI reading research, found diverse theories and practices regarding the use of MI strategies to teach early literacy. Moreover, Bolduc's (2008) review of literature cited five correlational and eight quasi-experimental studies documenting some relationship between music and emergent literacy capacity among children. Additionally, Biggs et al. (2008) found that real-time music pitch recognition (singing) significantly correlated with reading ability. Specific MI strategies, such as those involving singing, may provide practical strategies to enhance student reading achievement. According to Cooper (2010), both songs and stories have the capacity to increase vocabulary and promote future academic success by advancing language skills, increasing memory, and promoting emerging literacy. Cooper (2010) also suggested that both reading and singing immerse children in the structure, rhythms, rhymes, and melodic patterns of language.

Singing-Integrated Reading Fluency Instruction

Darrow et al. (2009) investigated the effects of a music-integrated curriculum designed to enhance reading skills of second grade students in five related studies. The curriculum, known as the *Register Music/Reading Curriculum*, included such music activities as singing, playing instruments, listening to music, and moving to music. The Gates-MacGinitie Reading Test was administered before and after the music/reading intervention for all studies. Results indicated that the total test gain scores of children receiving the music/reading curriculum intervention were higher than those for control conditions in four of the five studies. In addition, the researchers replaced the reading instruction time with the music/reading curriculum – a move that is not often possible in traditional classroom settings.

A number of researchers have recommended the act of singing as a way to enhance reading fluency (Rasinski, 2006; Sample, 2005) and promote emerging literacy (Cooper, 2010; Mizener, 2008; Patel & Laud, 2009; & Smith, 2000). Cooper (2010), for example, stated, "We share information and ideas through lullabies and literature, emotionally connect with the children involved, and promote emerging literacy" (p. 25). Likewise, Smith (2000) noted that emerging readers singing Tom Paxton's song *Going to the Zoo* did not realize that they were simultaneously reinforcing reading skills as they followed a classmate tracking the lyrics printed on chart paper. As researchers Iwasaki, Rasinski, Yildirim, and Zimmerman (2013) reported, "When students sing while tracking the lyrics to songs, they are in essence reading" (p. 138). They asserted that melody, repetition, brevity, rhyme and rhythm make songs easy to learn and remember and help create classroom environments ideal for building student confidence. Furthermore, they found that the aforementioned song components also provided opportunities for struggling readers to fluently read lengthy texts.

The benefits of music instruction on reading achievement have been the focus of numerous researchers (Gromko, 2005; Kinney, 2008; Kouri & Telander, 2008; Mizener, 2008; Schön et al., 2008). Gromko (2005), for example, specialized in phonemic awareness research and on the relationship between music instruction and reading ability. She and others (Ehri et al., 2001) have determined that phonemic awareness is one of the best predictors of how well children will learn to read.

Many researchers have supported prosody as integral to authentic fluent reading (Dowhower, 1991; Schrauben, 2010; Schwanenflugel, Hamilton, Kuhn, Wisenbaker, & Stahl, 2004). Prosody is frequently defined, even by literacy researchers, in musical terms: "The musical qualities of language, including intonation, expression, stress, and rhythm" (Bear, Invernizzi, Templeton, & Johnston, 2008, p. 384). It is further defined as being segmented into the musical elements of stress and pitch variations (Dowhower, 1991; Schwanenflugel et al., 2004); length of phrases between pauses and pausal intrusions (Dowhower, 1991); and appropriateness of phrases (Schwanenflugel et al., 2004). Researchers have also investigated music and reading parallels in a variety of settings (Biggs et al., 2008; Staum, 1987). Staum (1987), for example, examined prosodic reading and singing performances of special needs students, and Biggs et al. (2008) studied a sing-to-read program for middle school students, concluding that "Prosody appeared to have a direct and significant connection to reading comprehension" (p. 88). In her research of evidence-based teaching ideas, Towell (1999/2000), found that children experienced more success in learning to read when words of the text were familiar, such as words to favorite songs.

Connections between Reading Motivation and Reading Attitude

The frames of reference for this study embody the constructs of attitude and motivation, the goal of reading fluency, and the act of singing. These elements combine to provide the conceptual framework which aims to investigate the impact of singing-integrated (SI) reading instruction on reader motivation and how SI reading instruction impacts oral reading fluency. Fluency, phonemic awareness, vocabulary, comprehension, and phonics instruction can all lead to reading success, but if students are not motivated to read, they may never reach their reading potential (Gambrell, 2011). Nolen (2007) recognized that reading is a rich area for motivation research because it can be pleasurable, informational, a classroom task, or a medium for social interaction.

Earlier research on reading motivation of elementary students has generally focused on reading attitudes, gender differences, and grade-level differences (Gambrell, Palmer, Codling, & Mazzoni, 1996). As reading research has progressed, motivation has been shown to play a critical role in learning (Guthrie & Wigfield, 2000). Furthermore, reading comprehension for all students in the elementary grades is a common goal and becomes especially important in the upper elementary grades (Guthrie et al., 2007). Rasinski (2012) posited that fluency forms the bridge between word recognition and comprehension. Articles reviewed offer implications that result from lack of reading motivation, reasons for the importance of reading motivation on the fluency of elementary students, and the overlapping dimensions between motivation and attitude.

Rationale. The inability to read fluently can create substantial barriers for students – barriers that usually compound as students grow older (Peebles, 2007). The lack of reading motivation is frequently a hindrance to the enthusiasm of upper elementary and secondary school students to improve essential reading skills and strategies for success in school (Melekoğlu &

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Wilkerson, 2013). Students with low motivation often struggle with poor performance in reading activities, anxiety and stress around the task of reading, and an encumbered willingness to improve reading skills (Melekoğlu, 2011; Melekoğlu & Wilkerson, 2013). Investigating methods to help stimulate the constructs of reading motivation and reading engagement are important in literacy instruction (Gambrell, 2011; Putman & Walker, 2010). Struggling readers lack motivation to learn and believe that they will fail in their academic endeavors (Guthrie & Davis, 2003). Gambrell (2011) defined motivation to read as the likelihood of engaging in reading or choosing to read and suggested that at all stages of reading development, motivation is essential.

According to Bandura (2000), motivation leads to engagement. Together with interpersonal and study skills, motivation and engagement are enabling factors that have been shown to lead to reading achievement (DiPerna, Volpe, & Elliott, 2002). Some researchers in the field of education define academic engagement as "a composite of specific classroom behaviors" (Greenwood, Horton, & Utley, 2002, p. 329). Participating in tasks and reading aloud are two in a list of classroom behaviors that are described as engagement in academic responding (Delquadri, Greenwood, Whorton, Carta, & Hall, 1986). Both of these behaviors were found in a singing-related study of struggling middle school readers (Biggs et al., 2008).

Motivation plays a critical role in learning (Guthrie & Wigfield, 2000), and a student's general academic progress is limited without reading comprehension skills and the motivation for reading. Highly motivated readers engage in reading for its valued benefit (pleasure, satisfaction, or information) and not for its intrinsic value (Gambrell, 2011). According to Brophy's (2008) theory and research, motivation focuses more on helping students appreciate the value of what they are learning and less on intrinsic motivation factors fostered through social

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context and expectancy. Conceptualizations of reading motivation are varied (Schiefele, Schaffner, Möller, & Wigfield, 2012). Definitions include a distinction between current and habitual reading motivation (Schiefele et al., 2012). Current motivation to read is the extent of an individual to read a specific text in a given situation, and individuals who embody habitual reading motivation show a form of current reading motivation repeatedly (Schiefele et al., 2012). The *Motivation for Reading Questionnaire* (MRQ; Wigfield & Guthrie, 1997) assesses habitual forms of motivation. Some researchers do not consider individual interest as a form of reading motivation (Schiefele et al., 2012). Wigfield and Guthrie (1997) categorized motivation as either intrinsic or extrinsic. Students who are extrinsically motivated to read might desire good grades, superior performance in school, or use their motivation as a means to avoid a negative outcome (Wigfield & Guthrie, 1997). Intrinsic motivation to read is defined as the willingness to read because the act of reading is satisfying or rewarding (Schiefele et al., 2012). McKenna and Kear (1990) developed the *Elementary Reading Attitude Survey* (ERAS) with items that ask respondents how they feel about reading at different times and under a variety of circumstances. The relationship of the MRQ (Wigfield & Guthrie, 1997) to the ERAS (McKenna & Kear, 1990) is evident in the MRQ's introductory directions that inform students that the purpose of the MRQ is to ascertain how they feel about reading:

> We are interested in your reading. The sentences in this questionnaire
> describe how some students feel about reading. Read each sentence and
> decide whether it describes a person who is like you or different from
> you. There are no right or wrong answers. We only want to know how
> you feel about reading (p. 1).

ERAS research (McKenna & Kear, 1990) has shown that a student's attitude toward reading is a major factor in reading achievement. One study using the ERAS examined reading attitudes of students for the purpose of investigating whether they are motivated to read (Fitzgibbons, 1997). Results showed that elementary students' attitudes about reading were generally favorable, with females scoring more positively for both recreational and academic reading attitudes. In addition, more differences in student attitudes were explained by the differences in their schools (activities, teacher quality, and school environment) than by differences in grade, gender, and pretest and posttest times of year.

It is widely suggested that in order for teachers to engage students with meaningful literacy instruction and to improve academic outcomes, teachers must be aware of students' attitudes, motivations, and reading habits (Afflerbach & Cho, 2011; Alvermann, 2002; Guthrie & Wigfield, 2000; International Reading Association [IRA] & National Council of Teachers of English [NCTE], 2010; Moje, Overby, Tysvaer, & Morris, 2008). According to the theory of Ajzen & Fishbein (2005), attitude acquisition is affected by direct experiences with an object, beliefs about an object, and social norms concerning the object. Their model was made specific to reading by McKenna and colleagues (McKenna, 2001; McKenna, Kear, & Ellsworth, 1995), who, however, did not explicitly differentiate their reading attitude concept from the reading motivation concept (Schiefele et al., 2012). In a 2012 study of middle school reading attitudes, that demonstrated a conceptual overlap between measures of reading attitude and intrinsic motivation, McKenna et al. argued that "A positive attitude, under the right circumstances, contributes to intrinsic motivation. A negative attitude, in contrast, tends to inhibit motivation, although this tendency might be obviated through the manipulation of extrinsic factors" (p. 285). These researchers suggested that a primary factor believed to influence attitudinal change is

one's motivation to conform to the expectations of others. Students in this study were administered a version of the original ERAS (McKenna & Kear, 1990) that borrowed some items, adapted others, and included questions about digital texts (McKenna et al., 2012).

Based on the research of Reynolds and Miller (2003), who delineated intrinsic motivation into the three components (affect, expectancy, and value), McKenna et al. (2012) argued that these motivation conceptualizations could be thought of as containing attitude (affect) and two factors that contribute to attitude (expectancy beliefs related to self-efficacy and beliefs related to reading value). In other words, they suggested that attitude can be viewed as either a component of motivation or as a factor that influences motivation. Reynolds and Miller (2003) defined affect as "general feelings of self and one's emotional reactions to a task that affect cognitive resources and performance" (p. 8). ERAS (McKenna & Kear, 1990) items that are indicators of the affect component of intrinsic motivation include: (a) Question 1: How do you feel when you read a book on a rainy Saturday?; (b) Question 2: How do you feel when you read a book in school during free time?; and (c) Question 3: How do you feel about reading for fun at home?. Reynolds and Miller (2003) defined expectancy as "beliefs about one's ability to control, perform, or accomplish a task" (p. 8). ERAS (McKenna & Kear, 1990) items that represent such beliefs about reading include: (a) Question 6: How do you feel about starting a new book?; (b) Question 11: How do you feel when the teacher asks you questions about what you read?; and (c) Question 18: How do you feel when you read out loud in class?.

In their development of the *Motivation to Read Profile* (MRP; Gambrell et al, 1996), researchers designed the Reading Survey portion of the MRP as an assessment of two dimensions of reading motivation: self-concept as a reader and value of reading. Helping students find value and meaning in classroom reading tasks and activities is one of Gambrell's

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(2011) *Seven Rules of Engagement* for motivating students to read. Similarly, Reynolds and Miller (2003) stated that value consists of "goal orientations or cognitive representations of the purpose of a task as well as task value beliefs about the importance of a task, one's interest in a task, and one's idea about the ultimate utility of a task" (p. 8). ERAS (McKenna & Kear, 1990) items that showcase value beliefs include: (a) Question 12: How do you feel about doing reading workbook pages and worksheets?; (b) Question 15: How do you feel about learning from a book?; and (c) Question 19: How do you feel about using a dictionary?.

Singing and motivation for reading achievement. Research has suggested allowing children to choose art and music tasks to integrate with literacy activities, because results have shown that having choices can enhance meaning-making and learning goals (Turner & Paris, 1995). In addition, using singing as a mediator for reading motivation is an example of Brophy's (2008) exploration of ways to allow students to retain the content taught, to value it, and to desire to learn more about it.

In a singing-related study, Biggs et al. (2008) found that a learn-to-sing software program, *Carry-a-Tune* (CAT), had a positive impact on reading development. The seventh- and eighth-grade students in the study were motivated by the singing component of the software program, and the program's technological text format was appealing to them. Students were engaged in the CAT activities and were therefore motivated to read because of the software's repeated song lyrics reading component (Florida Center for Reading Research [FCCR], 2007). When comparing pretests and posttests of instructional reading level, results of the CAT study showed that the treatment group demonstrated a 1.37 grade level increase in instructional reading level, whereas the control group showed little change in instructional reading (Biggs et al.,

2008). Because of these results, CAT's name was eventually changed to *Tune in to Reading* (TiR).

TiR is a research-based, computer software literacy program that targets reading fluency and comprehension and provides engaging practice through repeated reading and singing of song lyrics (FCRR, 2007). The objective of the program is improved reading by means of student engagement, enhanced by a built-in digital tracking feature that allows students to follow the words with the music and record themselves as they sing (FCRR, 2007; Nardo, 2009). In its original CAT version designed to teach singing skills via software, the TiR program garnered the interests of researchers at the Florida Center for Reading Research (FCRR) at the University of South Florida because of its positive impact on public school reading scores (Biggs et al., 2008; FCRR, 2007; Nardo, 2009). FCRR (2007) researchers saw the song component of the TiR program as a "motivational attraction for students since it is very natural to want to sing songs orally and repeatedly" (p. 2). The act of singing motivated students in the study and actively engaged them in repeated activities that fostered reading fluency.

Children often react spontaneously to music, portraying what Sipe (2002) referred to as expressive engagement. Niland (2009) suggested that creative arts such as literature and music provide the environment for these forms of engagement with early childhood students, strongly stating, "As play is the natural learning medium in early childhood, it makes sense for us to facilitate playful arts experiences for young children by incorporating music with literature" (p. 8).

The Accountability Movement and the Place of Music in Schools

Historical perspective. In 1963, President John F. Kennedy spoke of linking art with the creation of national values in a speech given at the Robert Frost Library dedication service at

Amherst College: "I see little more importance to the future of our country and our civilization than full recognition of the place of the artists" (Wetenhall, 1989, p. 306). Art for art's sake appeared to be dominating the dichotomy in the public discourse as arts education advocates worked to justify arts in education for its own intrinsic values (Upitis, Smithrim, Patterson & Meban, 2001). Also in 1963, Chicago schools began to play a pivotal role in the education reform movement with its focus on arts education (Rabkin & Redmond, 2006). The focus was born out of a 1963 African-American student boycott in which students protested deplorable conditions in Chicago schools. Practical arts advocates attempted to use the arts to motivate Chicago school students to stay in school. Again, the purpose of the arts in education was framed as a dichotomy of economy versus aesthetics (Rabkin & Redmond, 2006).

In the mid-1970s, researching and evaluating outcomes of students participating in arts programs had become a focus of arts education research along with how the arts in core curricula subjects correlate to higher academic achievement (Rabkin, 2004). By the 1980s, education reformers in Chicago and across the country claimed that urban school systems were generally failing to meet the educational needs of low-income students (Rabkin & Redmond, 2006). These students were described as being disengaged from education and deficient in self-discipline, good work habits, and higher order skills such as the ability to solve problems, think critically, communicate clearly, and work collaboratively (Rabkin & Redmond, 2006). Arts educators who favored the aim of practical arts felt that the current role of arts in schools as separate from the general curriculum (i.e., art for art's sake) gave it a marginalized position in schools. These practical supporters of the arts sought to bring the arts out of its marginalized position and into the core of school curricula as a means of fostering student creativity and experiential learning

(Rabkin, 2004). In recent years, the dual aims of arts in education have been at the center of policy debates as the accountability movement in education was born.

High-stakes testing and the place of music in schools. The language of *A Nation at Risk* (NCEE, 1983) implanted fear that our economic and national security were under attack and in dire need of reform because of the failing public school system by painting a somber picture of the state of education in America and called for a renewed commitment to schools. The commitment marked an end to the minimum competency testing movement and a shift to the high-stakes testing movement. Fueled largely by the NCLB Act of 2001 (U.S. Department of Education), proponents of high-stakes testing believed that high-stakes testing efforts would raise the nation's academic achievement levels through the implementation of assessed state standards and through a scheme of rewards and sanctions based on academic performance on standardized tests (Amrein & Berliner, 2002; Heilig & Darling-Hammond, 2008; Hess et al., 2002).

The theory behind NCLB was that schools and students would automatically increase educational output under pressure to demonstrate accountability (Heilig & Darling-Hammond, 2008). The practical idea was that schools, teachers, and students would be sure to achieve academically if they just tried harder, and thus, equitable educational opportunities for all students would close the achievement gaps between different groups of students, especially minorities and whites (Heilig & Darling-Hammond, 2008; Spohn, 2008). NCLB advocates argued that test-based accountability provides test scores that inform teachers about which students are achieving and which students need extra help (Hamilton et al., 2002).

A discussion of accountability effects on arts education can spark a passionate debate. During the past twenty years, in particular, accountability and testing in schools have been causes of concern for arts educators because of fears that schools will feel pressure to divert

instructional time toward tested areas of the curriculum and away from untested subjects such as music, visual arts, and theatre (Mishook & Kornhaber, 2006). From preschool through high school, students and teachers are feeling the negative effects of accountability on music programs (Gerber & Gerrity, 2007; Persellin, 2007). Persellin (2007), for example, argued that many preschools have felt pressure to accelerate learning – at the expense of early childhood music programs – to prepare young children for elementary school, and students in the poorest communities have suffered because of the emphasis on ranking scores, not on research-based instruction designed to improve school resources to help such students. Mazzeo (2001) questioned the intentions of policy makers and suggested that their perspectives and priorities shape the design and implementation of state testing efforts. With public buy-in, questionable school board personnel, mass schooling, and high-stakes testing, part of the significance of test-based accountability lies in its on-going ability to perpetuate this hegemonic thought process (Au, 2009). Similarly, arts education researchers realized that learning in the arts would matter to reformers and education policy makers if it had effects that "transferred" to their priorities and if it could be integrated into other subjects (Chapman, 2005; Rabkin, 2004).

NCLB supported the arts in its inclusions of arts programs as one of ten core academic subjects, but when states were required to fund core academic subjects through NCLB, tested core subjects received priority, and instructional time in such subjects as history and music was reduced in many schools (Persellin, 2007; Spohn, 2008). Advocates of practicality in arts education saw arts integration into subjects such as language arts and science as a way to legitimize the arts while instructional time in the arts was being reduced.

How the accountability movement changed music instruction. Funds for instructional materials, time, and students are three resources that arts educators identify as needs (Hinckley,

2000). Under NCLB legislation, many educators have felt that these needs have gone unmet because primary focus of NCLB was to teach every child to read (Darrow et al., 2007).

Instructional time in tested subjects was often increased under NCLB, and the introduction of NCLB placed increasing demands on teachers to provide evidence of student achievement in tested areas, causing promoters of arts education to worry that the time devoted to untested subjects would be reduced in school curricula (Mishook & Kornhaber, 2006). Reports also indicated a decline in enrollment of students in music classes and instrumental ensembles (Ng & Hartwig, 2011).

In many arts-integrated programs, the primary aim is usually student achievement in the non-arts component of the integration. Several schools have experienced significantly higher standardized test scores in arts integration schools when compared with non-arts integration schools (Catterall & Waldorf, 1999). Empirical studies of arts integration, for example, have shown schools promoting arts integration for purposes of motivating students for learning basic skills objectives such as singing the names of the fifty states (Mishook & Kornhaber, 2006). Bresler (1995) developed a typology of arts integration programs, categorizing them as "co-equal, cognitive integration," "subservient integration," "affective integration," or "social integration" (p. 1). In her meta-analysis of qualitative studies that explored arts integration in action, Bresler (1995) found that most examples were "subservient" where the arts served a secondary role, and were present only as a means to facilitate rote memory of facts from the dominant subject domain. Having students sing the fifty states is one example of subservient integration.

Hatfield (1999), who explained his sentiments below, is one of many arts advocates, however, who supported the arts for their own intrinsic value and not as a secondary role to other subjects (Hatfield, 1999).

If the content of the national arts standards, state arts frameworks,

and local arts curricula is recognized as a core area of learning for

U.S. students, why do arts advocates focus so heavily on the

impact of the arts on learning in and across other disciplines? (p. 3).

Furthermore, arts for art's sake advocates also argued that if arts education contributes uniquely to students' education, then arts educators should avoid becoming sidetracked into using the arts to accomplish achievement in areas that reading, writing, and mathematics can accomplish as well (Hatfield, 1999). Regarding music instruction specifically, Trinick (2012) argued that music integrated with other subjects compromises music in its own right. In a collection of studies called *Champions of Change: The Impact of the Arts on Learning* (Fiske, 1999), studies showed that low-income students who were high arts participators did better in school than peers who were low arts participators, and that low-income students who participated in arts programs performed better across a wide range of variables from school grades to leadership (Heath & Roach, 1999). One of the studies found evidence that transfer occurred in schools that evoked arts-related competencies in other subjects (Burton, Horowitz, & Abeles, 1999).

Defining music education in elementary schools offers several complex scenarios. Music teachers, for example, are faced with unique challenges of what educational interests are to be served with regards to music education in its various forms, styles, methodologies, performance aspects, and pedagogical approaches (Jorgensen, 2008). Jorgensen (2008) also described how

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these purposes relate to music as an accompaniment for or as incidental to other art forms, explaining how personal experience has shown that a combination of several approaches to both music teaching and music research can be tailored to fit the needs of the educational situation. A music research project, for example, can just as easily investigate pedagogy and music listening skills as it can performance aspects of music and the effects of music on reading achievement (Gromko, 2005; Mizener, 2008). The latter often serves as a basis for approval from policy makers on legislation that affects the arts in schools. A study by Abril and Gault (2006) showed that 94.9% of elementary school principals reported employing a music teacher at their school. In addition, these researchers observed that teachers often depend on the support of the principal to meet their specific objectives, such as establishing school-wide support for the music curriculum.

Although the effects of NCLB on the instructional time of untested subjects are perceived differently by different populations (Spohn, 2008), evidence does suggest that numerous schools, nationwide, have experienced a reduction since its implementation (Pedulla et al., 2003). In their findings from a national survey of teachers, the National Board on Educational Testing and Public Policy found that in states with high stakes for students, more teachers indicated that they spent more time on instruction in tested areas and less on instruction in areas such as fine arts, physical education, and foreign language (Pedulla et al., 2003). Findings on the amount of time spent on arts-related subjects may be skewed because study participants tend to be administrators and teachers of tested subjects and not arts teachers (Spohn, 2008).

Despite evidence of the positive effects of music education, it frequently plays a marginal role among school subjects, even though it is often the center of the lives of numerous young people outside school (Denac, 2009). Fear of the arts being undermined has been a common

theme across the country since the onset of the accountability and standards movement (Mishook & Kornhaber, 2006). The state of Virginia, for example, approved the *Standards of Learning* (SOLs) in 1995 and based its school accreditation criteria on SOL test scores. Mishook and Kornhaber (2006) conducted a study of Virginia elementary and high schools to investigate the influence of the high-stakes SOL tests on the arts in schools with a self-identified strong focus on the arts and in schools without such a focus. These researchers chose Virginia because it embraced a rigid accountability system and they were able to match eight arts-focused schools with non-arts-focused schools for district, school level, demographic characteristics, and racial breakdown. Using principal interviews, emergent themes on the increase in arts-integrated activities with tested subjects were shown to be in response to SOL testing. Other findings included dual perceptions of the term *arts integration*. Also in the study, some school principals described arts integration as the presence of strong arts instruction, or a co-equal approach to the arts, and other principals viewed arts integration as making arts subjects secondary to tested areas of the curriculum, a positive development for arts instruction in their opinions. Additional results showed that schools with a strong arts focus and a relatively low poverty student population tended to employ a more co-equal approach in which the core focus on the arts remained fundamentally unchanged by SOL tests. Conversely, most non-arts-focused schools with low poverty student populations tended to highlight arts subjects only for how they could be integrated with tested subjects. One principal, for example, mentioned the integration of music and social studies, and put the responsibility of integrating on the music teacher, thereby failing to recognize the music curriculum and the music SOLs adopted by the state.

Other arts integration researchers (Wilkins et al., 2003) explored the relationship between instructional time in the arts and physical education and other core curricular subjects and the

impact on school achievement. Using data collected from 547 Virginia elementary schools, results indicated no meaningful relationship between instructional time in art, music, and physical education and passing rates on the Virginia Standards of Learning tests.

Music-integrated instruction as a part of teaching oral reading fluency has not been a subject of the studies mentioned, and because reading instruction time in many elementary schools has been bound by scripted reading programs (Ainsworth, Ortlieb, Cheek, Pate, & Fetters, 2012; Valencia, Place, Martin, & Grossman, 2006), little time is left in the school day for supplementary means of teaching reading. A viable alternative for implementing different activities and methods of reading instruction is Out-of-School Time (OST) opportunities commonly found in after-school and summer programs.

The National Institute on Out-of-School Time Programs

The National Institute on Out-of-School Time (NIOST) website (www.niost.org) provided the following information on its contributions to teaching and learning. The NIOST focuses much of its work on under-served populations and functions to bridge research and practice. It also provides evaluations, consultation sessions, and training opportunities to create innovative and effective solutions to OST needs at the local, state, regional and national levels. The NIOST *Afterschool Program Assessment System* (APAS) is recognized by the U.S. Department of Education. To date, their journal, *Afterschool Matters*, is the only national, peer-reviewed journal in the OST field and is dedicated to promoting professionalism, scholarship and consciousness in the field of after-school education. The journal serves researchers and those engaged in shaping youth development policy with several articles dedicated to issues of literacy and identity.

As reported in the NIOST Fact Sheet on Children and Youth In Out-of-School Time (2009) a review of 50 studies of after-school programs conducted by The Afterschool Alliance suggested that quality after-school programs showed improved engagement in learning, test scores, and grades, with high-risk youth showing the greatest benefits. One of the 50 studies, an eight-state study known as *Promising Afterschool Programs*, suggested that disadvantaged elementary and middle school students who attended high quality after-school programs regularly for at least two years are academically further ahead of their peers who did not spend supervised time in out-of-school activities.

Out-Of-School Time Literacy Programs

OST literacy programs are offered for children at a variety of grade levels. According to Lauer et al. (2006), after-school and summer school are the most common OST timeframes during which OST programs are delivered. One study prior to NCLB (U.S. Department of Education, 2001) investigated the Hilltop Emergent Literacy Project (HELP), an after-school educational program serving poor, mostly African American children in kindergarten through third grade (Bergin, Hudson, Chryst, & Resetar, 1992). The literacy component of HELP was the *Sing, Spell, Read, & Write (SSRW) Program* (Dickson, 1972), a phonics-based reading program that incorporated phonics-related songs as part of the curriculum. The study showed that school failure in the early years had overwhelming effects on academic achievement, self-esteem, motivation, and level of aspiration, making academic progress a primary goal of both policymakers and educators alike (Bergin et al., 1992). Literacy results were based on scores from the *Metropolitan Readiness Test* (MRT), the *Metropolitan Achievement Test* (MAT), and report card grades received by the after-school participants in their respective elementary schools. Although the MRT and MAT included reading scales and subscales, neither of these

measures assessed oral reading fluency. In addition, the singing portion of the SSRW was phonics-based. Study results, however, indicated that HELP students scored higher on report card grades and on standardized tests than non-HELP students (Bergin et al., 1992). In a later SSRW study (Bond, Ross, Smith, & Nunnery, 1995), researchers studied eight randomly selected SSRW schools in a large metropolitan school district to explore the reading, writing, and spelling score on standardized achievement tests. Results showed that SSRW was more effective than the basal curriculum for teaching word attack and letter-word identification (Bond et al., 1995). Moreover, oral reading fluency was not assessed in the study (Bond et al., 1995).

Post-NCLB OST literacy studies, in both after-school and summer school programs, have shown similar results. A Yale University study of 599 students in first through third grades, for example, found that children who had the highest attendance rates at after-school programs also had significantly higher reading achievement than children in other afterschool care contexts such as with parents, relatives, or self-care situations (Mahoney, Lord, & Carryl, 2005). In another OST study, adolescent participants in a media club, who self-identified mostly as not being interested in reading, reported spending a large amount of time reading outside of school, as evidenced in their OST media club activity logs (Alvermann et al., 2007). In a five-week summer literacy program for kindergarten and first-grade students who were at moderate risk for reading difficulties, researchers found a statistically significant positive effect of the summer school intervention on student outcomes the following school year in both kindergarten (effect size on the alphabetic assessment = 0.69) and first grade (effect size on the reading fluency assessment = 0.61; Zvoch & Stevens, 2013). In a study of adolescents participating in the DUSTY (Digital Underground Storytelling for Youth) OST program, Hull and Zacher (2004) found that program records provided documentation of the importance of encouraging

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underachieving readers to create new literate identities for themselves by integrating information communication technologies and multimedia.

Under provisions of NCLB (2001), states must provide supplementary education services to low-income students in Title 1 schools that fail to help all children reach proficiency in reading and mathematics. Such supplementary education services must occur outside the regular school day, resulting in NCLB efforts to focus new attention on children's OST activities in after-school and summer school programs (Lauer et al., 2006). In the NIOST's review of 50 studies conducted by The Afterschool Alliance (NIOST Factsheet, 2009), both reading programs and music-related programs are prevalent. Research on singing-integrated literacy OST programs, however, is limited, and no studies conclusively documented the use of singing-integrated oral reading fluency instruction in OST programs and its impact on oral reading fluency scores. According to the National Association of Secondary School Principals (Phillips, 2005), "Seventy-five percent of students with literacy problems in the third grade will still experience literacy difficulties in the ninth grade" (p. 3). In light of these findings, the purpose of this study is to implement an after-school singing-integrated oral reading fluency program designed to target reading fluency factors, such as reading rate, Word Recognition in Isolation, and Word Recognition in Context through guided repeated oral reading (GROR) and to enhance reading motivation of third-grade students.

Definition of Terms

Operational definitions of the key terms and study variables are stated below.

According to the NRP, fluent readers can read text with speed, accuracy, and proper expression (NICHD, 2000). For the purposes of this study, the Oral Reading Fluency (ORF) definition used is based on the NRP's historical analysis of ORF and its application. The NRP's

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report (NICHD, 2000) explained how concepts of fluency changed from focusing primarily on high-speed word recognition to recognizing the role of fluency in comprehension processes. In addition, the NRP's quantitative research synthesis reported on GROR and independent reading as two instructional approaches to fluency development (Kame'enui & Simmons, 2001). Kame'enui and Simmons also reported that the fluency construct should always include both accuracy and speed.

Arts-integrated (AI) instruction is an educational phenomenon that has been well-documented for some time (Campbell, Connell, & Beegle, 2007; Eisner, 1967; Fiske, 1999; Oreck, 2006; Rabkin & Redmond, 2006). Rabkin and Redmond (2006), for example, highlighted the origins of AI in America as originating from a conference in January 2000 of 150 corporate and foundation grant makers in education, child development, and the arts. The goal of the conference was to explore the common ground between programs interested in strengthening educational opportunities for students and programs that supported the arts. For the purposes of this study, AI refers to any instructional practices that integrate arts education (music, visual art, theatre) with non-arts education. Music-integrated (MI) instruction is a specific form of AI and is described as a variety of music interventions used instructionally to affect reading skills as described in Standley's (2008) meta-analysis. Singing-integrated (SI) instruction is singled out as a vocal means of integrating music instruction as opposed to an instrumental instructional method.

The fluency assessment was the *Qualitative Reading Inventory – 5* (QRI-5). The QRI-5 is the fifth edition of the *Qualitative Reading Inventory* (Leslie & Caldwell, 2011). Each edition has included advances based on researching factors affecting word identification and comprehension. Like previous editions, QRI-5 continues to emphasize authentic assessment of

reading abilities, from the most emergent readers to advanced readers. The specific fluency components assessed were Word Recognition in Isolation (WRI), Word Recognition in Context (WRC), and reading rate, calculated as Words per Minute (WPM; Leslie & Caldwell, 2011). WRI is assessed by both the number of words read correctly within one second (Correct Automatic – a measure of automaticity) and the total number read correctly regardless of timing (Total Number Correct) and is a context-free word-identification test using lists composed of the most common words found in QRI-5 grade-level passages. WRC is a word-identification test for words recognized when reading within the context of a passage and is also a measure of automaticity. WPM is a measurement of reading speed or rate (Leslie & Caldwell, 2011), specifically a measure of the number of words read in 60 seconds.

The adapted *Elementary Reading Attitude Survey* (ERAS) was used in this study to measure student attitudes towards reading in efforts to assess possible intervention effects on reading motivation. The original ERAS is based on the cartoon character Garfield (McKenna & Kear, 1990). The adapted version is based, instead, on a smiley face graphic. Reading motivation is defined in this study as "the individual's personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading" (Guthrie & Wigfield, 2000, p. 405) taking also into account the environment surrounding the individual (Putman & Walker, 2010).

The NIOST Fact Sheet on Children and Youth In Out-of-School Time (2003) defines OST as the hours during which school-age children are not attending school and are doing something other than activities mandated by school attendance (Lauer et al., 2006).

Chapter 3

Methodology

Studies of elementary after-school programs that focus on literacy skills have shown positive results for overall reading achievement (Bergin et al., 1992; Mahoney et al., 2005; Zvoch & Stevens, 2013). Some in-school and after-school programs have incorporated singing-integrated (SI) reading instruction (Bergin et al., 1992; Bond et al., 1995). In the literature, after-school singing-integration programs that specifically targeted oral reading fluency (ORF) skills, however, are extant. Therefore, the current research study was designed to address the following questions:

1. What is the impact of singing-integrated oral reading fluency instruction on the reading motivation scores of third-grade students attending an after-school program?

2. What is the impact of singing-integrated oral reading fluency instruction on the oral reading fluency scores of third-grade students attending an after-school program?

Design of Study

The researcher used a single-group pretest-posttest design (Figure 1) as a means of determining if statistically significant differences from pretest to posttest measures existed for overall reading motivation and oral reading fluency. Two instruments were used in this study: the adapted *Elementary Reading Attitude Survey* (ERAS; McKenna & Kear, 1990) and the *Qualitative Reading Inventory – 5* (QRI-5; Leslie & Caldwell, 2011). All participants took the

adapted ERAS pretest and the QRI-5 pretests prior to beginning the SI ORF intervention. The adapted ERAS pretest-posttest consisted of a recreational reading attitude subscale, an academic reading attitude subscale, and a composite reading attitude scale. The QRI-5 pretest measures consisted of the Word Recognition in Isolation (WRI) Correct Automatic score, the WRI Total Number Correct score, the Word Recognition in Context (WRC) Passage 1 accuracy score, and the Words per Minute (WPM) for Passage 1. The researcher utilized SI ORF with Guided Repeated Oral Reading (GROR) as the intervention. At the end of the intervention, all participants took the ERAS posttest and the QRI-5 posttests, which consisted of the WRI Correct Automatic score, the WRI Total Number Correct score, the WRC Passage 2 accuracy score, and the WPM for Passage 2.

$$A \longrightarrow O_{1a}\, O_{2a}\, O_{3a} O_{4a}\, O_{5a} \longrightarrow X \longrightarrow O_{1b} O_{2b}\ O_{3b} O_{4b}\ O_{5b}$$

A = Group
O_{1a} = Adapted Reading Attitude Pretest (ERAS)
O_{2a} = WRI Correct Automatic Pretest (QRI-5)
O_{3a} = WRI Total Number Correct Pretest (QRI-5)
O_{4a} = WRC with Passage 1 Pretest (QRI-5)
O_{5a} = WPM with Passage 1 Pretest (QRI-5)
X = Singing-integrated Intervention
O_{1b} = Adapted Reading Attitude Posttest (ERAS)
O_{2b} = WRI Correct Automatic Posttest (QRI-5)
O_{3b} = WRI Total Number Correct Posttest (QRI-5)
O_{4b} = WRC with Passage 2 Posttest (QRI-5)
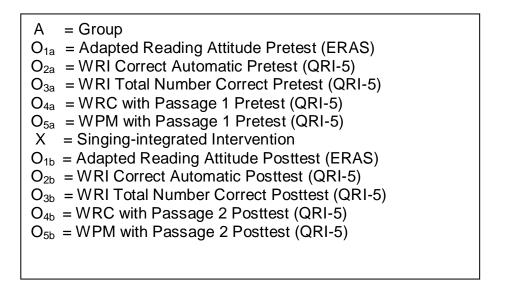O_{5b} = WPM with Passage 2 Posttest (QRI-5)

Figure 1. Single-group pretest-posttest design

Participants and Setting

Participants for this study were a convenience sample of third-grade students who attended an after-school program sponsored by a local civic league at one of two elementary

schools (location A and location B) in a metropolitan area of approximately 318,611 in central Virginia (U.S. Census Bureau, 2014). A research description (see Appendix A) and parental consent form (see Appendix B), requesting parent permission to allow students to participate in the intervention, were sent home with the 35 students whose parents signed the initial intent to participate. Of the 35 original potential participants, 94.3% of the parents returned the consent form, leaving 5.7% of the parents who did not return the form. There were 33 participants total, with 23 enrolled at location A and 10 enrolled at location B. Two participants discontinued the after-school program at location A after week two and one discontinued the after-school program following week eight of the intervention. In addition, one participant at location B left the after-school program after week four, resulting in a total sample size of 29 students for data analysis (14 boys and 15 girls). Students in the final sample received instruction during the school day from a total of 27 different third-grade teachers dispersed among eleven different elementary schools.

Participants were involved in the intervention program for one hour two days a week for eight weeks at their respective locations, except on student holidays. Sixteen sessions were held at each location. The intervention took place in the music classroom at location A and in the art classroom at location B. Other activities offered at the after-school program included homework completion, academic tutoring (mathematics and reading), academic enrichment from area university students (mathematics and reading), chess tutorials, modern dance lessons, visual arts classes, self-esteem lectures, and daily dinner.

Intervention Strategies

Introduction. Each intervention session lasted one hour, for a total of two hours per week per location. Participants received the SI ORF intervention inspired by Hudson, Lane, and

Pullen (2005). The intervention included the following steps: (1) modeled fluent oral reading using children's books with texts that can be sung by repeatedly singing fluently to the students until the students memorize segments of the lyrics (Rasinski, 2003); (2) provided oral support and modeling for readers using assisted reading and choral singing of text (broken into individual lines, words, letters, and patterns for building decoding skills), paired reading, and audiotapes (Rasinski, 2003); (3) offered many opportunities for practice using repeated reading and repeated singing of progressively more difficult texts (Chard et al., 2002; Rasinski, 2003); (4) provided individual free-time during which participants chose from a variety of books that were read and sung either alone, in pairs, or in small groups (Allington, 2002); and (5) encouraged prosody development through cueing. Beginning two weeks prior to the final assessment process, the singing component was gradually faded out (Standley, 2008).

Modeling fluent oral reading. Teacher-modeling of oral fluent reading was uninterrupted (Richards, 2000) and took place at the beginning of every class for approximately fifteen minutes. The role of the adult in providing a fluent rendition of text is critical, especially for struggling readers (Zutell & Rasinski, 1991). The teacher-researcher (subsequently identified as the teacher in this section) modeled fluent reading when giving directions and making announcements, as well as during instructional time, when singing-integrated children's books were both read and sung (see Appendix C). Some of the books contained multiple songs, and some contained lyrics to only one song.

Oral support. Students received oral support (singing and non-singing) from the teacher and from each other via paired oral reading and choral reading. Paired oral reading was carried out by having each participant in a pair read silently, then read aloud three times in succession to the other student, while the listener adopted the teacher's role in giving suggestions

and positive feedback (Richards, 2000). Reading chorally was achieved through the call and response technique in which the teacher read or sang a lead phrase and the students (as a group) read or sang the response phrase. Choral reading and singing provided the same oral rendition of text using both speaking and singing voices, respectively, as students responded in unison, thus creating a sense of community (Rasinski, 2003). Oral support activities sometimes took place for fifteen minutes or were combined with repeated reading and singing activities for a total of thirty minutes.

Repeated reading and repeated singing. The GROR technique, with the use of texts that are read and sung, was used during the intervention. GROR during the intervention consisted of participant groups and individuals reading the same passage for two to three weeks and receiving ongoing teacher feedback (Conderman & Strobel, 2006). According to Rasinski (2012), songs provide authentic, engaging, teacher-supported, and meaningful ways to approach repeated readings. Students were engaged in oral repeated reading and singing of passages that were sometimes enriched with oral support from the teacher.

Individual free-time. Participants were allowed ten to fifteen minutes of free-time every other week during the second session to choose texts supplied by the teacher to explore on their own. They would usually read and sing individually for a few minutes, then choose to partner with a classmate. Occasionally, groups of two to four would form, and each participant would take turns sharing one book. Studies have shown that unrestricted choice increases favorable affective perceptions of the reading experience (Schraw, Flowerday, & Reisetter, 1998).

Instrumentation

Adapted *Elementary Reading Attitude Survey* (ERAS). The ERAS was created and normed in 1989 by McKenna and Kear (1990) to assess the reading attitudes of elementary

students in grades one through six. The survey measures the recreational dimension of reading attitudes (10 items) and the academic dimension of reading attitudes (10 items). A total reading attitude score can be obtained by adding the scores for the recreational and academic subscales. Score totals for each subscale can range from ten points (least positive attitude towards recreational or academic reading) to 40 points (most positive attitude towards recreational or academic reading). Totals for the composite scores can range from 20 points (least positive overall reading attitude) to 80 points (most positive overall reading attitude). A copy of the ERAS can be found in McKenna and Kear's (1990) seminal reading attitudes study.

The ERAS employs an even number of scale points to avoid a neutral category which participants often select to circumvent committing to a more substantive response and because young children typically can discriminate only among five or fewer objects at one time (McKenna & Kear, 1990). It contains four Garfield attitude depictions from left to right, with the following descriptions only told verbally to the students and not printed with the Garfield graphics (Happiest Garfield, Slightly smiling Garfield, Mildly upset Garfield, and Very upset Garfield) with point ratings of 4, 3, 2, and 1, respectively, selected based on a student's general feeling regarding the questions asked (McKenna & Stahl, 2009). Jim Davis created the Garfield character on which the survey is based and agreed to supply four black-line poses ranging from very happy to very upset (McKenna & Kear, 1990). The Garfield character was selected because of it was recognizable and because of the likelihood that young children would easily comprehend its point rating representations (McKenna et al., 1995).

The ERAS (McKenna & Kear, 1990) was considered for the current study rather than the *Motivation for Reading Questionnaire* (MRQ; Wigfield & Guthrie, 1997) because it offered less than half the number of items than on the MRQ. An adapted version of the ERAS was used for

the current study because its point ratings were accompanied with child-friendly graphics. Students selected one of four "smiley face" emoticons with the following descriptions printed underneath each emoticon figure and rated with point ratings of 4, 3, 2, and 1, respectively: *Love it!*, *Like it*, *Ho Hum…*, and *Don't like it!*). The Scoring Guide, as shown in Table 1, applies to both the original and adapted versions of the ERAS and is located on the ERAS Scoring Sheet.

Table 1

Elementary Reading Attitude Survey Scoring Guide

4 points	Happiest face
3 points	Slightly smiling face
2 points	Mildly upset face
1 point	Very upset face

Note. From McKenna, M. C., & Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. *The Reading Teacher, 43*(9), 626-639. Retrieved from http://www.jstor.org /stable/20200500

Norms for interpreting ERAS scores were created by administering the instrument to a sample of 18,138 students in grades one through six with students representing 95 school districts in 38 U.S. states (McKenna & Kear, 1990). The sample was balanced for gender and included only five more female students than male students (Kazelskis et al., 2005). Reliability of the ERAS was obtained by measuring the internal consistency of the instrument's scales using Cronbach's alpha (Kazelskis et al., 2005; McKenna & Kear, 1990). The Cronbach's alpha statistic was calculated at each grade level for the recreational subscale, academic subscale, and for the composite scale score, with coefficients ranging from .74 to .89 (McKenna & Kear, 1990). The reliability coefficients established for third grade were .80 for the recreational

subscale score, .81 for the academic subscale score, and .88 for the composite score (McKenna & Kear, 1990).

Construct validity evidence for the recreational subscale was obtained by polling the norming group for public library availability, ownership of a library card, whether or not students in the group had books checked out from their school library at the time of the assessment, and reported hours of television watched per night (McKenna & Kear, 1990). Validity of the academic subscale was tested by examining the relationship of scores to teacher-categorized reading ability. McKenna and Kear (1990) explained that the ERAS contained high construct validity for recreational and academic reading attitudes.

Administration procedures are presented in the *Directions for Use* section that accompanies the instrument. The researcher followed these directions, which included familiarizing students with the instrument and its purpose. The purpose was explained to the participants as a means of studying their thoughts and feelings about reading and that there were no incorrect responses. After a sample question was read aloud and picture responses reviewed and discussed, the researcher read all 20 items aloud twice as participants marked their responses. The researcher summed each participant's recreational reading subscale score, academic reading subscale score, and then summed both subscale scores to calculate a composite score.

Qualitative Reading Inventory – 5. The assessment that was used to assess fluency was the *Qualitative Reading Inventory – 5* (QRI-5; Leslie & Caldwell, 2011). The QRI-5 is the fifth edition of the *Qualitative Reading Inventory*. Each edition has included advances based on researched factors affecting word identification and comprehension (Leslie & Caldwell, 2011). As in previous editions, QRI-5 continues to emphasize authentic assessment of children's

reading abilities, from the most emergent readers to advanced readers. The components used for the current study were Word Recognition in Isolation, both Correct Automatic and Total Number Correct, Word Recognition in Context, and reading rate, calculated as Words per Minute.

The following reliability and validity information was included in the QRI-5 by authors Leslie and Caldwell (2011). The QRI is an informal assessment instrument, and validity and reliability results were scored by different individuals. Leslie and Caldwell (2011) examined estimates of inter-scorer reliability, internal consistency reliability, and alternate-form reliability using Cronbach's alpha. Inter-scorer reliability on independent examiners identifying oral reading miscues was .99 for total miscues and meaning-changing miscues. Each examiner was trained using QRI-5 guidelines. Words selected for the Word Recognition in Isolation component (i.e., word lists) were chosen from words in the passages. The selected words represented words with the highest Standard Frequency Index (Leslie & Caldwell, 2011). QRI-5 developers used the standard error of measurement instead of the traditional correlational measure of reliability, because the latter is based on variability, and because students who scored within the *Frustration* level on easier material were not given harder passages, the variability was reduced. Ideas for passage content were taken from concepts familiar to children reading at different levels in basal readers, children's literature, and content-area (science and social studies) textbooks (Leslie & Caldwell, 2011).

For empirical validation, related-means tests were conducted for the QRI-5 to compare students' total accuracy, total acceptability, retelling, and comprehension on each new QRI-5 passage with another passage on the same readability level from a previous QRI edition (Leslie & Caldwell, 2011). Results showed that the new QRI-5 passages were similar in difficulty to passages in previous QRI editions, but the new ones tended to be more difficult to read

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accurately and fluently (Leslie & Caldwell, 2011). From pre-primer through third grade, the inter-correlations among word identification on word lists, total oral reading accuracy, semantically acceptable accuracy, reading rate and corrected rate were positively statistically significant (*r*s from .34 to .59, *n*s of 275-434, *p*s <.001).

Word Recognition in Isolation (WRI). Participants were required to read the second grade word list as the first pretest measure. Although the participants were third graders, the researcher chose the second grade word list as the beginning point because the intervention was initiated at the beginning of third grade, so the participants would be expected to read at the second grade level. While administering the word list, the researcher recorded the WRI Correct Automatic percentage to measure automatic accuracy (i.e., students were given one second to respond) of reading words in isolation. When this percentage was added to the number of Correct Identified words (i.e., the words identified when given time to decode), the WRI Total Number Correct percentage was recorded. According to Leslie and Caldwell (2011), accuracy refers to whether or not the student reads the word correctly, and the automaticity of response refers to whether or not the student is able to give any response within one second. All responses begun after one second were recorded in the Identified column with a "C" if identified correctly and written phonetically if identified incorrectly. Next, the number of correct responses in both the Correct Automatic and the Identified columns were totaled and a percentage score was calculated. The same word list was administered once for the pretest and once for the posttest because the QRI-5 has only one word list per level.

Word Recognition in Context (WRC). After reading the word list, each student read a second grade passage, because the second grade word list was used as the beginning point. For the current study, participants orally read a second grade passage as a pretest and a different

second grade passage as a posttest. The researcher assessed participants for Total Accuracy by counting all miscues (errors) and using the miscue count to determine an accuracy percentage which then determined if the passage was at the independent, instructional, or frustration level (Leslie & Caldwell, 2011). Oral reading miscues, according to Leslie and Caldwell (2011), can include Substitutions, Omissions, Insertions, Self-corrections, Reversal of words or phrases, and Punctuation ignored. The researcher counted the total number of miscues (except Punctuation ignored) per passage and subtracted that number from the total number of words in the passage, then divided the difference by the total number of words in the passage. Although several researchers acknowledge *Punctuation ignored* as miscues, they disregard them when counting total miscues (Morris, 2014; Leslie & Caldwell, 2011; McKenna & Stahl, 2009). McKenna and Stahl (2009), for example, stated, "Conventional wisdom suggests that hesitations and ignoring punctuation should not be counted" (p. 49). Moreover, Leslie and Caldwell (2011) argued that they do not consider repetitions, hesitations, and omission of punctuation as deviations from the printed text, and they do not count them as miscues because they tend to be scored unreliably. The result is the percentage of WRC for both the second grade pretest passage and the second grade posttest passage. The researcher then evaluated the oral reading automaticity or relative reading quickness, known as reading rate (Leslie & Caldwell, 2011), by multiplying the number of words in the passage by 60 and dividing that product by the number of seconds it took the participant to read, thus producing a WPM score for both pretest and posttest passages.

Data Collection Procedures

The researcher visited each location two times per week for twelve weeks. The pretest data sources were administered during Weeks 1 and 2 for two days at each of the two locations.

The intervention was carried out over the following eight weeks (Weeks three through 10). The posttests were administered during Weeks 11 and 12 following the intervention.

Data collected for this study came from third-grade participants. The researcher maintained hard copy files of pretests and posttests and entered all pretest and posttest scores into SPSS (v. 22). Student data were saved in a secure location and all identifiers were removed from the final data set prior to analysis and publication. During data collection, each participant was originally listed by first initial, last initial, and the first initial of their after-school location. Once data entry was complete, all initials were deleted from the file, and each participant was randomly assigned a number from one to 29 in order to preserve participant anonymity.

The first data collection component was obtained from the adapted ERAS (McKenna & Kear, 1990). The initial ERAS scores were reported from ten to forty as interval variables for the recreational reading attitude and academic reading attitude subscales. After summing the subscale scores, composite reading attitude scores were reported from twenty to eighty as an interval variable for overall reading attitude. ERAS data were collected for both the pretest and posttest.

The second data collection component was obtained from the QRI-5 (Leslie & Caldwell, 2011). WRI was reported as the percentage of words read automatically and correctly in one second (i.e., Correct Automatic) and the total percentage of words read correctly in more than one second (i.e., Total Number Correct) from a second grade list of 20 words. Additionally, using a second grade QRI-5 passage, WRC and WPM were both reported as interval variables.

Variables

SI ORF instruction represented the independent variable, which included the instructional materials provided to the participants during GROR instruction. The adapted ERAS (McKenna

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& Kear, 1990) and the QRI-5 (Leslie & Caldwell, 2011) were administered in a pretest-posttest format. Attitude and oral reading fluency indicator variables were provided by the adapted ERAS posttest and the QRI-5 posttests, respectively, the latter of which included: (1) WRI Correct Automatic; (2) WRI Total Number Correct; (3) WRC passage reading accuracy; and (4) reading rate on passage reading, calculated as WPM. The dependent variables included the adapted ERAS (McKenna & Kear, 1990) recreational reading attitude score, academic reading attitude score, the composite scale score (recreational reading score + academic reading score), and three continuous oral reading fluency variables reported as percentage scores, and one continuous oral reading fluency variable reported as WPM.

Analysis

The first research question was analyzed using the subscale and composite scale scores of the ERAS. The second research question was analyzed using the QRI-5 ORF percentage scores for WRI Correct Automatic, WRI Total Number Correct, WRC, and WPM. The statistical procedure conducted to explore the performance data was the paired-samples *t*-test. Significance levels and mean scores for each variable were analyzed in order to answer the research questions.

Inter-rater Reliability

For the current study, fluency data were generated by the researcher and a second rater, a veteran elementary school reading specialist of twelve years. To establish inter-rater reliability, the second rater scored a randomized subset of participant data. Using SPSS (v. 22), the researcher generated the appropriate data subset by performing a random allocation sequence using SPSS (v. 22). In behavioral research, 10 % of the complete dataset is the standard guideline deemed acceptable to test inter-rater reliability (De Swert, 2012). For these reasons, 10% of 29 participants rounds to three participants. Therefore, the first three numbers of the

randomly generated dataset were "2", "25" and "27"; thus, the researcher used the participants whose participant numbers corresponded to the random output.

VCU Institutional Review Board

After the prospectus approval process, the research study was processed through an expedited review and was approved by the Virginia Commonwealth University Institutional Review Board (VCU IRB # HM20001655), consistent with the rules and regulations of the university. Prior to the intervention, parents were given a research description (see Appendix A) and parental consent form (see Appendix B), requesting parent permission to allow their children to participate in the intervention. The researcher entitled the intervention *Sing It! to Read It!*

Delimitations

The research population was delimited to elementary children in grade three who attended an after-school program. Although it was hoped that this research would result in data of importance to classroom learning and instruction in reading acquisition, it is imperative to delimit the results to the research population. The data will be specific to children who attended the Fall 2014 and Spring 2015 after-school program sponsored by a local civic league in a metropolitan area in Central Virginia.

Chapter 4

Results

Introduction

This chapter is organized into three sections. The first section provides results of the data associated with the first research question related to the reading attitude survey data. The second section explores the findings for the second research question which includes oral reading fluency scores. The third section describes the inter-rater reliability of fluency scores conducted on 10% of the data.

Impact on Reading Attitude/Motivation

The researcher began the analysis by comparing the pretest and posttest scores of the participants in relation to the first research question.

1. What is the impact of singing-integrated oral reading fluency (SI ORF) instruction on the reading motivation scores of third-grade students attending an after-school program?

As shown in Table 2, the analyses for this question focused on participants' outcomes on the adapted *Elementary Reading Attitude Survey* (ERAS; McKenna & Kear, 1990). Paired-samples *t*–tests were conducted to compare participants' recreational, academic, and composite reading attitude scores on the adapted ERAS pretest and posttest.

Recreational reading attitude. In order to answer the recreational reading motivation component of the research question, the researcher investigated the following null and alternative hypotheses:

$H_0: \mu_{1b} - \mu_{1a} = 0$ versus $H_1: \mu_{1b} - \mu_{1a} \neq 0$

Where μ_{1b} = mean posttest scores for the adapted ERAS recreational reading

attitude

μ_{1a} = mean pretest scores for the adapted ERAS recreational reading

attitude

There was a significant difference in pretest scores for recreational reading attitude ($M = 29.41$, $SD = 6.65$) and posttest scores for recreational reading attitude ($M = 26.52$, $SD = 6.62$), $t(28) = 2.64$, $p < .05$. Results suggest that the SI ORF instruction had a significant effect on students' recreational reading attitudes, indicating a significant decrease from pretest to posttest. The two variables were moderately correlated, $r(27) = .60$, $p = .001$.

Academic reading attitude. In order to answer the academic reading attitude component of the research question, the researcher investigated the following null and alternative hypotheses:

$H_0: \mu_{1b} - \mu_{1a} = 0$ versus $H_1: \mu_{1b} - \mu_{1a} \neq 0$

Where μ_{1b} = mean posttest scores for the adapted ERAS academic reading

attitude

μ_{1a} = mean pretest scores for the adapted ERAS academic reading

attitude

In contrast, there was no significant difference in pretest scores for academic reading attitude ($M = 29.10$, $SD = 6.76$) and posttest scores for academic reading attitude ($M = 28.00$, $SD = 7.42$), $t(28) = 0.850$, $p = .40$. Results suggest that the SI ORF instruction had no significant effect on students' academic reading attitudes. More specifically, results suggest that after participants were exposed to the singing-integrated reading fluency instruction, their academic reading

attitudes did not change significantly from pretest to posttest. The two variables were

moderately correlated $r(27) = .52, p < .05$.

Table 2

Descriptive Statistics and Paired-Samples t-test Results for Reading Attitude

	Pretest		Posttest		
	M	*SD*	*M*	*SD*	*t*(28)
Reading Attitude Outcome					
Recreational	29.41	6.65	26.52	6.62	2.64*
Academic	29.10	6.76	28.00	7.42	0.85
Composite	58.52	12.84	54.52	12.39	1.93[†]

Note. Reading Attitude Outcome from adapted *Elementary Reading Attitude Survey* (McKenna & Kear, 1990).
*p < .05. † = .06.

Composite reading attitude. In order to answer the composite reading attitude

component of the research question, the researcher investigated the following null and alternative

hypotheses:

$H_0: \mu_{1b} - \mu_{1a} = 0$ versus $H_1: \mu_{1b} - \mu_{1a} \neq 0$

Where μ_{1b} = mean posttest scores for the adapted ERAS composite reading

attitude

μ_{1a} = mean pretest scores for the adapted ERAS composite reading

attitude

The difference approached significance for pretest scores for composite reading attitude ($M =$

58.52, $SD = 12.84$) and posttest scores for composite reading attitude ($M = 54.52, SD = 12.39$),

$t(28) = 1.93, p = .06$. Results suggest that the SI ORF instruction approached significance on

students' overall reading attitudes, with scores decreasing from pretest to posttest. The two variables were moderately correlated, $r(27) = .61$, $p < .001$.

Impact on Oral Reading Fluency

The researcher continued the analysis with the second research question by comparing pretest and posttest scores of participants.

2. What is the impact of singing-integrated oral reading fluency instruction on the oral reading fluency scores of third-grade students attending an after-school program?

As shown in Table 3, the analyses for this question focused on participants' outcomes in four areas of the *Qualitative Reading Inventory – 5* (Leslie & Caldwell, 2011): Word Recognition in Isolation (WRI) Correct Automatic, Word Recognition in Isolation (WRI) Total Number Correct, Word Recognition in Context (WRC), and reading rate as calculated by words per minute (WPM).

WRI correct automatic. In order to answer the WRI Correct Automatic component of the research question, the researcher investigated the following null and alternative hypotheses:

$$H_0: \mu_{2b} - \mu_{2a} = 0 \quad \text{versus} \quad H_1: \mu_{2b} - \mu_{2a} \neq 0$$

Where μ_{2b} = mean posttest WRI score for the Correct Automatic percentage

μ_{2a} = mean pretest WRI score for the Correct Automatic percentage

A paired-samples t–test was conducted to compare participants' performance on the WRI Correct Automatic pretest and posttest. There was a statistically significant difference in pretest scores for WRI Correct Automatic ($M = .78$, $SD = 0.12$) and posttest scores for WRI Correct Automatic ($M = .91$, $SD = 0.09$), $t(28) = 8.8$, $p = .01$. Specifically, results suggest that after participants were exposed to the singing-integrated reading fluency instruction, their number of

correct automatic words in isolation increased significantly from pretest to posttest. The two variables showed a strong correlation, $r(27) = .76$, $p < .001$.

WRI total number correct. In order to answer the WRI Total Number Correct component of the research question, the researcher investigated the following null and alternative hypotheses:

$$H_0: \mu_{3b} - \mu_{3a} = 0 \quad \text{versus} \quad H_1: \mu_{3b} - \mu_{3a} \neq 0$$

Where μ_{3b} = mean posttest WRI score for the Total Number Correct percentage

μ_{3a} = mean pretest WRI score for the Total Number Correct percentage

A paired-samples t–test was conducted to compare participants' on the WRI Total Number Correct pretest and posttest. There was a statistically significant difference in pretest scores for WRI Total Number Correct ($M = .85$, $SD = 0.12$) and posttest scores for WRI Total Number Correct ($M = .95$, $SD = 0.08$), $t(28) = 6.67$, $p < .001$. Results suggest that after student participants were exposed to the singing-integrated reading fluency intervention, their total number correct words in isolation increased significantly from pretest to posttest. The two variables showed a strong correlation, $r(27) = .77$, $p = .001$.

WRC accuracy. In order to answer the WRC component of the research question, the researcher investigated the following null and alternative hypotheses:

$$H_0: \mu_{4b} - \mu_{4a} = 0 \quad \text{versus} \quad H_1: \mu_{4b} - \mu_{4a} \neq 0$$

Where μ_{4b} = mean posttest WRC score

μ_{4a} = mean pretest WRC score

A paired-samples t–test was conducted to compare participants' performance on the WRC pretest and posttest. There was a statistically significant difference in pretest scores for WRC ($M = .95$, $SD = 0.03$) and posttest scores for WRC ($M = .97$, $SD = 0.02$), $t(28) = 5.57$, $p < .001$.

Results suggest that after participants were exposed to the singing-integrated reading fluency instruction, their number of words read in context increased significantly from pretest to posttest. The two variables showed a moderate correlation, $r(27) = .66$, $p < .001$.

Table 3

Descriptive Statistics and Paired-Samples t-test Results for Oral Reading Fluency

Oral Reading Fluency Outcome	Pretest		Posttest		
	M	*SD*	*M*	*SD*	*t*(28)
WRI Correct Automatic	0.78	0.12	0.91	0.09	8.75**
WRI Total Number Correct	0.85	0.12	0.95	0.08	6.67**
WRC	0.95	0.03	0.97	0.02	5.57**
WPM	102.95	28.30	109.52	30.64	2.08*

Note. Oral Reading Fluency Outcome from *Qualitative Reading Inventory – 5* (Leslie & Caldwell, 2011). WRI = word recognition in isolation; WRC = word recognition in context; WPM = words per minute.
*p < .05. **p < .01.

Reading rate. In order to answer the fluency component of reading rate, as calculated as WPM, the researcher investigated the following null and alternative hypotheses:

$$H_0: \mu_{5b} = \mu_{5a} \quad \text{versus} \quad H_1: \mu_{5b} \neq \mu_{5a}$$

Where μ_{5b} = mean posttest WPM score

μ_{5a} = mean pretest WPM score

A paired-samples t–test was conducted to compare participants' performance on the reading rate pretest and posttest, calculated as WPM. There was a significant difference in pretest scores for

WPM ($M = 102.95$, $SD = 28.30$) and posttest scores for WPM ($M = 109.52$, $SD = 30.64$), $t(28) = 2.08$, $p <. 05$. Results suggest that after participants were exposed to the singing-integrated reading fluency instruction, words per minute increased significantly from pretest to posttest. The two variables showed a strong correlation $r(27) = .84$, $p <.001$.

Inter-rater Reliability Analysis

The purpose of this section is to convey results of the reliability of fluency scores reported by rater A (the researcher) and rater B. In this study, reliability refers to the internal consistency of rater A's scores and rater B's scores. The WRI scores, Correct Automatic and Total Number Correct, ranged from a perfect score of 20 words correctly automatically identified or 20 total number of words correctly identified (100%) to 0 words correctly automatically identified or 0 total number of words correctly identified (0%), with each individual answer valued at 5%. The WRC score scale was based on the percentage of words read correctly in context with possible scores ranging from 0% to 100% in one percent increments. Reading rate was based on the WPM score of the number of words read per minute in context with possible scores ranging from 0 words read per minute to 171 words read per minute for the pretest and 304 words read per minute for the posttest.

Pretest scores. Each WRI Correct Automatic score pair was either the same or differed by only one word, thus falling within five percent. Similarly, each WRI Total Number Correct score pair was either the same or differed by only one word, thus falling within five percent. Each WRC score pair was either the same or fell within one percent. One WPM score pair yielded the same number of words per minute; the second pair differed by six words; and the third pair differed by only one word.

Posttest scores. The first two WRI Correct Automatic score pairs were perfectly aligned for both raters. Scores in the third pair differed by two words or by 10%. Each WRI Total Number Correct score pair was either the same or differed by only one word, thus falling within five percent. WRC score pairs were either the same or within two percent. For WPM pairs, two differed by only one word per minute, and the third pair revealed the exact same score.

Chapter 5

Discussion

Chapter Five provides a discussion of the study results. The first section summarizes the background and purpose of the study. The second section provides an overview of the research methodology followed by interpretation of results. After a section on study limitations, the chapter continues with implications and suggestions for further research and concludes with a discussion of the pertinence of the results for the role of educators.

Summary

Fluency research suggests that a fluent reader is one who reads text with accuracy, automaticity, proper expression, and with comprehension as the overall goal (Kuhn & Stahl, 2003; LaBerge & Samuels, 1974; NICHD, 2000; Rasinski et al., 2009). Once considered marginally important for reading success, oral reading fluency (ORF) has garnered increased attention and has become a more significant part of many reading programs (Hasbrouck & Tindal, 2006; Kuhn & Stahl, 2003).   The report of the National Reading Panel (NRP) and the work of other reading researchers have defined reading fluency as a bridge that joins word decoding and comprehension (NICHD, 2000; Rasinski, 2003). As posited by Rasinski, et al. (2009), "Fluency in any activity is achieved largely through practice . . . ." (p. 193). Samuels' (1979) study on the repeated readings method found that not only did students who orally practiced a piece of text improve on their reading rate and accuracy, but they also were able to

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read a new passage with higher levels of both fluency and comprehension. Children's literature often incorporates repeated text, and has, for some time, instructionally encouraged creativity and improved listening skills (Fallin, 1995). Over the past three decades, however, research has revealed a normal decline in reading interests and positive reading attitudes as students move to higher grade levels (Dwyer & Joy, 1980; Fitzgibbons, 1997; Lazarus & Callahan, 2000). Furthermore, researchers have investigated the importance of exploring methods to help stimulate the constructs of reading motivation (Anmarkrud & Bråten, 2009) and reading attitude (Fitzgibbons, 1997; McKenna, Conradi, Lawrence, Jang, & Meyer, 2012; McKenna & Kear, 1990; McKenna, Kear, & Ellsworth, 1995).

According to Rabkin and Redmond (2006), "Broadly understood as affective and expressive – not academic or cognitive - the arts survive at the margins of education as curriculum enrichments, rewards to good students, or electives for the talented" (p. 60). As Gullatt (2007) pointed out, the intent of NCLB was not to eliminate arts in schools, but as district budgets were often cut and accountability in reading and mathematics increased, the arts were often the first areas eliminated from the nation's classrooms. In addition, creative and innovative educational needs of students and teachers declined in many schools, in general, and classrooms, in particular, due to test-based accountability measures (Crocco & Costigan, 2007), while increased instructional time was allotted to federal literacy programs such as *Reading First* (Gamse et al., 2008).

The purpose of the current study is to investigate out-of-school time as an alternative instructional environment in which to incorporate singing and oral reading fluency instruction with a convenience sample of third graders ($n = 29$) attending a metropolitan after-school

program. The singing-integrated oral reading fluency instruction (SI ORF) included guided

repeated oral reading (GROR) and took place over an eight-week intervention period.

The adapted *Elementary Reading Attitude Survey* (ERAS; McKenna & Kear, 1990) was used to

measure participants' attitudes towards recreational and academic reading from pretest to

posttest. The *Qualitative Reading Inventory – 5* (QRI-5; Leslie & Caldwell, 2011) was used to

measure participants' fluency scores from pretest to posttest, specifically word recognition in

isolation (WRI) for percentages of word-list words automatically identified correctly and total

percentage of words identified; word recognition in context (WRC); and reading rate as

calculated in words per minute (WPM).

Interpretation of Results

The intent of this study was to address the following research questions:

1. What is the impact of singing-integrated oral reading fluency instruction on the reading
    motivation scores of third-grade students attending an after-school program?

2. What is the impact of singing-integrated oral reading fluency instruction on the oral
    reading fluency scores of third-grade students attending an after-school program?

Question one addresses differences in reading motivation from pretest to posttest as measured by

the adapted ERAS (McKenna & Kear, 1990). Question two addresses differences in oral reading

fluency as measured by WRI for automatic and total percentages of words correct, WRC, and

WPM from pretest to posttest. A total of 29 participants completed all pretest, intervention, and

posttest measures. The SI ORF intervention consisted of GROR and guided singing activities,

and included modeling of fluent reading from a variety of children's literature, and free time for

self-selected reading.

Reading motivation. Question one focuses on reading attitude and results reveal a statistically significant decrease in participants' recreational reading attitudes, show that the intervention had no significant effect on participants' academic reading attitudes, and approached statistical significance in the decrease of composite reading attitude scores from pretest to posttest. Several studies have used the ERAS to examine students' reading attitudes for the purpose of learning whether they are motivated to read (Kazelskis, et al., 2005; McKenna, Kear, & Ellsworth, 1995). In efforts to explore some of the key issues associated with reading attitude McKenna et al. (1995) found that reading attitudes can decline through the elementary grades due to the often increasing availability of more leisure options.

During the time period in which the ERAS (McKenna & Kear, 1990) posttest was administered, all participants were engaged in reading and language arts benchmark tests at their respective schools before coming to the after-school program. Every week of the intervention before the benchmark tests, students appeared excited to come to the intervention sessions, often reporting that they looked forward to having fun and singing fun songs during the sessions. On benchmark days, however, several had expressed regret at having to take the ERAS posttest. On those days their display of negativity may have manifested in the decline of their recreational reading attitude scores because after-school programs are often considered a time of recreation overall. In fact, more participants responded pretest to posttest with lower scores or gave the same *negative attitude* score (*mildly upset* or *very upset)* on the posttest for a majority (questions 1, 2, 3, 4, 7, and 8) of the ten ERAS recreational attitude survey questions. Research has shown that high-stakes testing decreases student motivation (Amrein & Berliner 2003). Nichols and Berliner (2008) posited that the exponential increase of test-taking has diminished the fun and meaning of learning, resulting in increased school drop-out rates, student boredom, and

cynicism. These researchers also reported a decrease in motivation even for high test scorers due to reports of being "used – for example, when they are pressured to take the test even when they are sick" (p. 17) and reports of feeling valued only for their high scores. For the composite reading attitude scores, the decrease of the mean score from pretest to posttest approached statistical significance. In a two-year longitudinal study, Fitzgibbons (1997) found a decline in ERAS composite scores from the pretest taken in fourth grade to the posttest taken in sixth grade. Similarly, over the two-year period, as with the current study, there was no control of differences between the pretest to posttest time period, including intervening variables of different teachers, different classrooms, and different classroom reading activities that would have occurred. Although the McKenna and Kear (1990) ERAS developmental study did not track students over time, results showed a decline in recreational, academic, and composite reading attitude mean scores from first through sixth grades.

Although reading attitude scores did not increase, students looked forward to their weekly sessions and were excited most days to see what songs they would sing and read (see Appendix C). They especially enjoyed singing and reading with a partner or chorally in small groups. Participants also found the content of the Alan Katz's collection of songs intriguing, because the lyrics were age-appropriate and the content displayed humorous situations with which they could relate. They were familiar, for example, with the content of the song "Give Me a Break" and its references to a student who had an overdue school library book. Furthermore, all participants enjoyed Katz's songs about cleaning your bedroom, being quiet in the library, and sports events such as football and cycling.

Threats to internal validity of attitude scores. According to McMillan (2008), some threats to internal validity can be inherent in single-group designs. These can include history

(threats of uncontrolled or unplanned events), maturation (threats from changes in participants over time), and pretesting (threats from the possibility of participants acting differently because they took a pretest; McMillan, 2008). History is a possible threat to the internal validity of the current study because each participant was administered a reading and language arts benchmark test at their respective schools during the same weeks in which the adapted ERAS posttest were given by the researcher. The timing of the ERAS posttest could not be delayed due to the benchmark testing timetable, because the SI ORF intervention ended the week before benchmark tests were given. In addition, benchmark tests were originally scheduled for two weeks prior, but were delayed due to schools closing for inclement weather during that exact time. Maturation is also a possible threat to internal validity because the participants can be subject to physical, social, and mental development changes over time and to short-term changes such as tiredness, boredom, hunger, and discouragement. Furthermore, a pretesting threat to internal validity may have occurred due to the presence of a pretest possibly making participants more aware of the impending intervention in a way that may not have happened had there been no pretest.

Oral reading fluency. Question two addresses differences in participants' fluency scores. Percentages of WRI words automatically correctly identified and percentages of total numbers of words correctly identified were revealed. Results show a statistically significant increase for both correct automatic words and total number of words correct. Automaticity helps release more cognitive energy necessary for reading comprehension (Rasinski, 2012). Likewise, the WRC percentages and WPM show statistically significant increases from pretest to posttest, revealing that the SI ORF intervention had a positive effect on both word recognition and reading rate during passage-reading. As suggested by Rasinski (2012), the goal of students should not just be a quest for reading speed, but students should be able to read both accurately

and automatically so that their cognitive resources can focus on text comprehension. Moreover, children can experience improvement with ORF when the texts utilized are either repeated, in song form, or both (Rasinski, 1990, 2003, 2006; Towell, 1999, 2000).

Threats to internal validity of ORF scores. Maturation is also a possible threat to internal validity regarding the increases in ORF scores from pretest to posttest because participants' mental development can naturally improve over time. In addition, the threat of pretesting may have occurred because of the improvement in all ORF assessments from pretest to posttest. Pretesting can impose a threat, because it is a measure of the dependent variable that is given before the intervention. In the current study, the pretest measured ORF, and SI ORF was the intervention, thereby possibly sensitizing participants to issues concerning ORF, merely because they took the pretest (McMillan, 2008).

Study Limitations

Weaknesses in this study were considered, and selection was deemed to be one factor affecting generalizability. The sample was a convenience sample, because parents of 29 after-school third graders enrolled their children in the current study. Consequently, the results are dependent on the characteristics of the sample (McMillan, 2008). Data for this study represent one metropolitan after-school program in two Central Virginia communities, which limits the ability to make inferences about a more general population.

Students learn and mature at different rates. There may also have been participants with learning disabilities or other reading difficulties of varying categories and degrees. Implementation fidelity was an expected limitation of the study due to the varied reading levels, general instructional levels, and needs of the participants.

Implications and Suggestions for Further Research

Participants exhibited more negative attitudes the day of the ERAS posttest. On a typical day, participants were cheerful and excited upon the researcher's arrival at the after-school program. The day the ERAS posttest was administered, however, the researcher discovered that all third graders were taking their district reading benchmark tests at their respective schools. The majority of participants informed the researcher that they were tired from being required to take tests during the school day. They were also reluctant to accompany the researcher to their usual location. Earlier in the semester, schools had been closed for over ten days due to a series of snowstorms in the area, and thus, after-school programs had also been closed. Although the researcher made up intervention days, the make-up days were often not the participants' normally-scheduled day and time. Research suggests that daily activities can impact performance and provide an opportunity for practice that can influence a child's developmental trajectory (Kellegrew & Kroksmark, 1999). In addition, participants may have been experiencing changes in their respective school routines and negative attitudes of their classroom teachers due to the pressures imposed by the high-stakes testing environment and missed school days. Although participants in the current study were taking district-level reading benchmark tests and not state tests, stakes could still be high because scores from such tests can be viewed as predictors of subsequent state test scores. A study examining relationships between testing in high-, moderate-, and low-stakes states, and teacher expectations for students, student morale, and student motivation showed that more elementary and middle school teachers than high school teachers reported that "their students are extremely anxious and are under intense pressure because of the state test" (Pedulla et al., 2003, p. 12). In addition, the study revealed that teachers, in general, reported feeling pressure from parents and administrators to raise test scores

(Pedulla et al., 2003). These findings may apply similarly to stakes imposed by district-level testing situations.

A normally-distributed randomized sample is suggested for further research. Such a sample would increase the statistical and practical significance of the paired-samples *t*-tests. The addition of a control group would have helped rule out single-group threats to internal validity. Moreover, the 29 participants were taught by 27 different third-grade teachers teaching at eleven different elementary schools. For future studies, the comprehension component of ORF, as assessed with the QRI-5 (Leslie & Caldwell, 2011), both through retellings and open-ended questions, could be investigated using the SI ORF instruction presented in the current study. Furthermore, the researcher would consider no more than two schools to control for number of teachers, student demographics, curriculum materials, teaching styles, and instructional expectations. Further research could also consider the book access factor (traditional and digital) for students, and the researcher could qualitatively observe specific classroom reading activities, instructional practices, and types of books accessed by each participant.

As the internet continues to alter the literacy landscape in the classroom, researchers suggest that classroom reading instruction that utilizes digital texts can serve as a motivator for students to read and can help increase students' reading fluency (Thoermer & Williams, 2012). O'Brien (2001) argued that students' full literacy competence is not apparent when based solely on the structure of school-sanctioned literacy. According to O'Brien, students of the twenty-first century are capable of displaying literacy skills that combine with art, sound, and print in multimedia settings (2001).

Further research could incorporate the investigation of the effects of SI ORF on the oral reading fluency of students using digital texts in OST programs and in the classroom. Research

on fostering reading skills in pre-Kindergarten, first, and second grade students has supported students' digital tracking of words, for example, while singing (Siulc, Sherwood, & Cook, 2006). Researchers offer a variety of suggestions for using digital texts (Larson, 2010; Thoermer & Williams, 2012). Thoermer and Williams (2012), for example, recommend cyber read-alouds that students listen to as models of fluent reading, prosodic comparisons of celebrity readings, and *Readers Theatre* digital scripts that students, themselves, read aloud Examples include cyber models featuring well-known actors and actresses; online literacy centers; and prosodic comparisons of digital text read-alouds that allow ease of access and the opportunity to stop and replay exact reading patterns to help students focus on tone, pitch, volume, and expression (Thoermer & Williams, 2012). E-books have been available for close to twenty years, and reading motivation, especially among students with reading difficulties, is fostered after students interact with multimodal texts such as those that offer animations, sounds (Larson, 2010), video, hyperlinks, and interactive tools (Larson, 2009). As suggested by Larson (2009), digital readers feature such textual forms as toy-inspired books, CD-ROM storybooks, online texts, and downloadable books. Today's readers are adept at manipulating multimodal experiences to receive and communicate messages, making it imperative for teachers to incorporate such experiences in OST and classroom settings (Larson, 2009).

Singing-integrated children's literature used in the study represented 16 tunes. Only seven of the tunes, however, were familiar to all participants (see Appendix D). As a result, the researcher spent 15 minutes teaching unfamiliar tunes or less familiar tunes in over half of the one-hour sessions. Future studies would begin with a survey to identify tunes familiar to all participants, and the researcher would use only children's literature based on these specific tunes.

When participants were already familiar with a specific tune and text, their singing of the text was effortless. Likewise, when participants were already familiar with the tune, but the text was unfamiliar, they were still able to sing the text effortlessly. In other words, when tunes were familiar, each note of the song tune was sung accurately with its corresponding word segment or syllable. One example is Alan Katz's song "I'm Still Here in the Bathtub" (with text unfamiliar to all participants) and set to the familiar tune of "Take Me Out to the Ballgame."

Teaching unfamiliar tunes and reviewing familiar tunes could create the ideal opportunity for elementary music teachers and classroom teachers to work together to provide music-integrated reading instruction. Tunes used by the classroom teacher during reading instruction could first be taught or reinforced in music class. Singing has been recognized as an instructional reading strategy (Biggs, et al., 2008; Rasinski, 2003), and integrative music and reading methods support claims of the benefits of integration on reading achievement (Gromko, 2005; Kinney, 2008).

Conclusions

Nurturing a love for reading is vital to eliminating the danger of illiteracy (Allyn, 2012). Too often, when students are unable to read fluently, they do not comprehend what they have read and often struggle academically in other subjects, as well (Allington, 2002; Carr, Taasoobshirazi, Stroud, & Royer, 2011). Students must also develop a positive attitude towards reading outside of the academic classroom. The National Center for Education Statistics (2011) noted that U.S. public school students who reported reading for fun almost every day scored higher on average on the 2011 National Assessment of Educational Progress than students who reported reading for fun less frequently.

When classroom teachers are free from the restraints that can accompany high-stakes testing environments, they can regain autonomy over the motivational and instructional needs of their individual students. Music-integrated instruction, which could be accomplished through collaboration between classroom teachers and music teachers, has offered motivating and research-based alternatives to traditional reading instruction (Gromko, 2005; Kouri & Telander, 2008; Mizner, 2008; Rasinski, et al., 2005). In fact, using singing specifically to teach reading has been used not only for motivational reasons, but also for the repetition that is often inherent in song lyrics, especially children's songs (Standley, 2008). Ideally, an ultimate goal, therefore, is implementation of SI ORF instruction in the elementary classroom.

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Appendix A

Parental Description Letter for Singing-Integrated Oral Reading Fluency Instruction

VCU Monroe Park Campus

Virginia Commonwealth University

School of Education
Department of Foundations
Oliver Hall
1015 W. Main St.
PO Box 842020
Richmond, VA23284

Date

Dear Parents or Guardians:

I am Yvette Moorehead Carter, a doctoral student of Dr. Valerie Robnolt of the School of Education at Virginia Commonwealth University. Dr. David Greennagel of the School of Music, and Dr. Rhodes and Dr. Cauley of the School of Education are members of my dissertation committee. I request permission for your child to participate in a research study to be used for my doctoral dissertation. I am conducting a research project on the effects of singing-integrated instruction on oral reading fluency and will be instructing your child in oral reading fluency lessons. The study is entitled "The Impact of Singing-Integrated Reading Instruction on the Oral Reading Fluency and Motivation of Elementary Students in an Out-of-School Time Program."

The study consists of the following activities:

1. I will ask your child to take part in singing-integrated oral reading fluency instruction two times per week for forty-five minutes per lesson.
2. Each lesson may include (1) listening to the teacher sing text from children's books; (2) singing book text with the teacher; (3) singing book text with other children; and (4) taking short oral reading fluency and comprehension quizzes.
3. Your child will be assessed on his or her motivation level during the activities.

The project will be explained in terms that your child can understand, and your child will participate only if he or she is willing to do so.

Only Dr. Robnolt, Dr. Greennagel, Dr. Rhodes, Dr. Cauley, and I will have access to information from your child. At the conclusion of the study, children's responses will be reported as group results only. At the conclusion of the study a summary of group results will be made available to all interested parents.

Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect the services normally provided to your child at the Boys and Girls Club, and your child will lose no benefits to which he or she is otherwise entitled. Even if you give your permission for your child to participate, your child is free to refuse to participate. If your child agrees to participate, he or she is free to end participation at any time.

Should you have any questions or desire further information, please feel free to contact

Ms. Yvette Moorehead Carter   Dr. Valerie Robnolt
Principal Investigator   Associate Professor
School of Education   School of Education
Virginia Commonwealth University   Virginia Commonwealth University
Richmond, VA 23284   Richmond, VA 23284
carterym@vcu.edu   vjrobnolt@vcu.edu

Keep this letter after completing and returning the signature page to me.

                            Sincerely,

                            Yvette Moorehead Carter
                            VCU School of Education

Appendix B

Consent Form and Signature Page

RESEARCH SUBJECT INFORMATION AND CONSENT FORM

TITLE: Sing It! to Read It!

VCU IRB NO.: HM20001655

This consent form may contain words that you do not understand. Please ask the project staff to explain any words that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

PURPOSE OF THE STUDY
This is a study to be conducted by Yvette Moorehead Carter, a doctoral student of Dr. Valerie Robnolt of the School of Education at Virginia Commonwealth University. Permission is being requested for your child to participate in a research study to be used for Ms. Carter's doctoral dissertation. The goal is to study how using singing can improve oral reading fluency and your child will participate in singing and reading lessons to improve reading skills and motivation to read.

DESCRIPTION OF THE PROJECT AND YOUR INVOLVEMENT
If you decide to allow your child to participate in this study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to your child.

If you and your child agree to participate, your child will attend this class during the time they are at the after-school program. The class will meet for one hour two times per week. During the first week, your child will be assessed on a variety of reading skills (e.g., reading a list of words and a short story) and motivation to read. Ms. Carter will be using a tape recorder to record your child's reading. All information collected and recorded will be kept confidential and will be stored in a locked file cabinet to which only Ms. Carter will have access. In addition, Ms. Carter will not be sharing any of your child's information with the after-school program staff, and all information gathered will be done without names attached.

Starting in the second week of the program and continuing for eight weeks, your child will take part in reading instruction that uses singing to improve fluency. Each lesson may include (1) listening to the teacher sing text from children's books; (2) singing book text with the teacher; (3) singing book text with other children; and (4) reading and singing book text individually. During the last week, your child will be assessed again on the same reading skills and motivation to read to determine growth.

Your child's participation in the study is voluntary. Choosing to participate or not participate in the singing and reading program will not affect other services and programs that your child receives in the after-school program. The information collected from your child's assessments will not be identified with your child's name because your child will be given a number that will be connected to the assessment results.

RISKS AND DISCOMFORTS
There is only minimal risk to your child for participating in this study.

BENEFITS TO YOU AND OTHERS
There are no direct benefits of the study, but your child will have the opportunity to work their reading skills. It is hoped that the information we learn as a result of your child's participation in the study will help other educators improve their teaching of reading skills and enhancing motivation to read.

COSTS
There are no costs for participating in this study other than the time your child will spend participating in the pre- and post-assessments and the singing and reading program.

PAYMENT FOR PARTICIPATION
There will be no payments for participation.

ALTERNATIVES
If your child does not participate in the study, he or she will participate in the normal activities in the after-school program.

CONFIDENTIALITY
Potentially identifiable information about your child will consist of pre- and post-assessments. Data are being collected for the purpose of evaluating the effectiveness and impact of the study. Your child's data will be identified by ID numbers, not names, and stored on the computers of the researchers. Ms. Carter will keep a file with your child's name and unique ID number stored separately from all data files. There will be no direct link between your child's identity and your child's responses in the data file. The file with your child's name and ID number will be stored by Ms. Carter in a locked drawer in her office. Access to all data will be limited to study personnel.

Data will be used to determine the effects of the singing and reading lessons on oral reading fluency and motivation. Findings about the impact of the study will be shared with Ms. Carter's dissertation committee and at regional and national conferences.

VOLUNTARY PARTICIPATION AND WITHDRAWAL
Your child does not have to participate in this study. If you choose to allow your child to participate, you may stop your child's participation at any time without any penalty. Your child may also choose not to answer particular questions that are asked in the study. If you choose to withdraw your child from the study, there will not be any effect on your child's participation in the after-school program.

Your child's participation in this study may be stopped at any time by the study staff without your consent. The reasons might include:
- the study staff thinks it necessary for your child's health or safety;
- your child has not followed study instructions; or
- administrative reasons require your child's withdrawal.

QUESTIONS
In the future, you may have questions about your child's participation in this study. If you have any questions, complaints, or concerns about the research, contact:

Dr. Valerie Robnolt
School of Education, Oliver Hall
1015 West Main Street
Richmond, VA 23284-3015
804-827-2649
vjrobnolt@vcu.edu

If you have any questions about your child's rights as a participant in this study, you may contact:

Office for Research
Virginia Commonwealth University
800 East Leigh Street, Suite 3000
P.O. Box 980568
Richmond, VA 23298
Telephone: 804-827-2157

You may also contact this number for general questions, concerns or complaints about the research. Please call this number if you cannot reach the research team or wish to talk to someone else. Additional information about participation in research studies can be found at http://www.research.vcu.edu/irb/volunteers.htm.

CONSENT

I have been given the chance to read this consent form. I understand the information about this study. Questions that I wanted to ask about the study have been answered. My signature says that I am willing for my child to participate in this study.

_____

Parent's Name printed

_____

Parent's signature   Date

_____

Child's Name printed

_____

Name of Person Conducting Informed Consent Discussion / Witness (Printed)

_____

Signature of Person Conducting Informed Consent   Date
Discussion / Witness

_____

Investigator signature (if different from above)   Date

Appendix C

Children's Literature Used in Singing-Integrated Oral Reading Fluency Intervention

Author (Illustrator)	Publisher, Publication Year	Title
Alan Katz (David Cutrow)	Margaret K. McElderry Books, 2001	Take Me Out of the Bathtub and Other Silly Dilly Songs
	Margaret K. McElderry Books, 2003	I'm Still Here in the Bathtub: Brand New Silly Dilly Songs
	Margaret K. McElderry Books, 2006	Are You Quite Polite?: Silly Dilly Manners Songs
	Margaret K. McElderry Books, 2006	Going, Going, Gone!: And Other Silly Dilly Sports Songs
Adapted and illustrated by Nadine Bernard Westcott	Little, Brown and Company, Inc., 1998	The Lady With the Alligator Purse
Adapted by Mary Ann Hoberman (Westcott)	Little, Brown and Company, Inc., 2003	Mary Had a Little Lamb
Lucille Colandro (Jared Lee)	Scholastic, Inc., 2006	There Was an Old Lady Who Swallowed Some Snow!
	Scholastic, Inc., 20013	There Was an Old Lady Who Swallowed Some Books!
Retold by Iza Trapani	Charlesbridge Publishing, Inc., 1995	Oh Where, Oh Where Has My Little Dog Gone?
	Charlesbridge Publishing, Inc., 1996	I'm a Little Teapot
	Charlesbridge Publishing, Inc., 1995	How Much Is That Doggie in the Window?
Adapted and illustrated by Christopher Canyon	Dawn Publications, 2005	John Denver's Take Me Home, Country Roads
Jane Cabrera	Scholastic, Inc., 2012	Twinkle, Twinkle, Little Star

Appendix D

Tunes Used in the Singing-Integrated Oral Reading Fluency Intervention

Familiar Tunes (Writer of Lyrics/Composer of Tune)	Unfamiliar and Less Familiar Tunes (Writer of Lyrics/Composer of Tune)
Take Me Out to the Ballgame (Jack Norworth/ /Albert Von Tilzer)	Do Your Ears Hang Low? (Unknown/ "Turkey in the Straw" – American Folk Song
Twinkle, Twinkle, Little Star (Jane Taylor/Traditional French Melody)	The Lady With the Alligator Purse (Traditional American rhyme/ "Miss Susie Had a Steamboat" – Traditional American tune)
Mary Had a Little Lamb (Sarah Josepha Hale/Lowell Mason)	How Much Is That Doggie in the Window? (Bob Merrill/ "Carnival of Venice" – German folk tune)
I'm a Little Teapot (George Harold Sanders and Clarence Z. Kelley)	Take Me Home, Country Roads (Bill Danoff, Taffy Nivert, and John Denver)
Rockabye Baby (Miss Effie L. Canning/Unknown)	Home On the Range (Brewster Higley)
There Was an Old Lady Who Swallowed a Fly (Rose Bonne/Alan Mills)	My Bonnie Lies Over the Ocean (Unknown/Traditional Scottish folk song)
The Wheels on the Bus (Traditional United States folk song)	America, the Beautiful (Katharine Lee Bates/Samuel A. Ward)
	On Top of Old Smokey (Traditional United States folk song)
	Oh Where, Oh Where Has My Little Dog Gone? (Septimus Winner/ "Lauterbach" – German folk song)

Vita

Yvette Marie Moorehead-Carter

Born: January 13, 1964, Alexandria, Louisiana

Resident of the county of Henrico in the Commonwealth of Virginia

Email: carterym@vcu.edu

EDUCATION

Doctor of Philosophy, Virginia Commonwealth University, Educational Leadership: Curriculum and Instruction – Richmond, VA. August 2015.

Yale National Initiative for Teachers, National Fellow, Yale University – New Haven, CT. 2006-2007.

Master of Arts in Music History and Literature, University of Virginia – Charlottesville, VA. May 1995.

German Language Certification, The Goethe Institute – Germany. October 1986.

Fulbright Scholar in Musicology, Goethe Universität Frankfurt am Main – Germany. July 1987.

Bachelor of Music in Music History and Literature, Howard University – Washington, DC. May 1986.

TEACHING EXPERIENCE

UNIVERSITY TEACHING

Adjunct Faculty, *Integrating the Arts in the Curriculum for Young Children*, Liberal Studies in Elementary Education, Virginia Commonwealth University – Richmond.

Mathematics Instructor, Student Special Services of Howard University, Washington, DC.
Responsibilities: Tutored University students in Geometry, Trigonometry, and Analytic Geometry.

Instructor, *Music Harmony*, College of Arts & Sciences, University of Virginia - Charlottesville.

K – 12 TEACHING

Teacher of the Year-Richmond City Public Schools, 2005.

Elementary General Music Teacher: Grades Pre-Kindergarten through 5, Richmond City Public Schools, Richmond, VA: August 1993 – 2015. *Responsibilities:* Taught general music curriculum; Directed student choirs; Taught and direct school-wide third grade recorder ensembles.

Middle School Teacher: Richmond City Public Schools, Richmond, VA: June-July, 2011. *Responsibilities:* Summer Renaissance Program Teachers: Taught history, current culture, and economic impact of celebrations in Brazil through hands-on rhythm instrument activities and documentaries of *Carnival* planning and parade logistics.

REGIONAL ELEMENTARY STUDENT HONORS PERFORMANCES

Virginia Elementary Music Educators Association All-Virginia Elementary Chorus – Fifth Grade
Choral Student Participants representing Maymont and Southampton Elementary Schools
2008-Newport News (Christopher Newport University)
2009-Harrisonburg (Turner Ashby High School)
2010-Winchester (Shenandoah University)
2013-Prince William County (Patriot High School)
2014-Hanover County (Hanover High School)

OTHER TEACHING EXPERIENCE

Music Teacher, Summer Learning Camp, Richmond Parks and Recreation, Richmond, VA.
Summer 1997. *Responsibilities:* Taught traditional piano and music theory.

Private Piano Instructor, Richmond, VA. 1991 - 1992. *Responsibilities:* Taught beginning and intermediate piano; Hosted annual recitals.

Piano Instructor and Curriculum Writer, Virginia Commonwealth University School of the Performing Arts, Richmond, VA. 1988. *Responsibilities:* Co-wrote the curriculum for the Suzuki Program; Provided Suzuki and traditional piano instruction; Taught music theory.

Music Instructor, G-Clef Studio, Glen Allen, VA. 1988-1989. *Responsibilities:* Provided music theory instruction and individual and group piano lessons; Directed yearly student recitals.

SCHOLARLY ACTIVITY

PUBLICATIONS

Carter, Y. M. (2007). *Latino children's folk music: A series of thematic writing exercises* (Yale University National Teachers Initiative Seminars - Curricular Resources, Volume IV, No. 5). Retrieved from http://www.teachers.yale.edu/curriculum/index.php?url

Zumbrunn, S., Carter, Y. M. & Conklin, S. (2014). Unpacking the value of writing: Exploring college students' perceptions of writing. *Journal of Research in Education*, *24*(2), 18 – 33.

CONFERENCES

NATIONAL CONFERENCE PRESENTATIONS

Carter, Y.M. (2011, November). How writing feedback and writing feedback perceptions relate to pre-service teachers' writing motivation and achievement. *Paper presented at the Association of Achievement Literacy Educators and Researchers 55th Annual Conference, Richmond, VA.*

Carter, Y.M. (1994, March). Identity and double-consciousness: The Afro-American Suite of Undine Smith Moore. *Paper presented at the Sonneck Society for American Music, Worcester, MA.*

REGIONAL CONFERENCE PRESENTATIONS

Carter, Y.M. (1999, February). Integrating the arts into the core curriculum. *Paper presented at the Virginia Commission for the Arts, Richmond, VA.*

Carter, Y.M. (2012, September). Is writing important? College students' perceptions of the value of writing. *Paper presented at the Virginia Educational Research Association, Charlottesville, VA.*

RESEARCH INTERESTS

- Arts-Integration with mathematics, social science, language arts, and science
- Instructional models that integrate singing and reading

SKILLS

Composing songs with academic content (mathematics, science, social science, language arts)
Instrumentalist (piano, flute, organ)
Curriculum writer

CURRICULUM WRITING

- Richmond Public Schools Department of Music, 1994
- Richmond Public Schools Department of Music, 2006

RESEARCH EXPERIENCE

Doctoral Extern (Virginia Commonwealth University School of Education), Richmond CenterStage. Wrote music-integrated curriculum units; researched fine arts resources; transcribed and edited podcasts for the Genworth BrightLights Education Centers; researched Virginia Standards of Learning for CenterStage school Partnerships:
1. SPEAK (Speaking Purposefully while Engaging in Artistic Knowledge)
2. FIELD (Family Involvement in Early Literacy Development through the Arts)
3. Entertainment Design and Technology
4. Ready, Set, Play Orchestral program
5. Jazz 21: The Voice of Social Change
   Summer 2011.

Activities Researcher, Richmond Symphony Education and Community Engagement Department. I collected music activities, online student activities, and music lesson plans for the symphony-school partnership program. Summer 2010.

Yale University National Fellow, Yale National Initiatives for Teachers. I studied with Yale professor Dr. Steven Pitti and completed music, history, and writing research for a music curriculum unit. Summer 2007.

Musicologist, The Richmond Community Chorale. I collected and edited research material for selected performance compositions and wrote and edited concert program notes. 1991-1992.

Research Assistant, National Endowment for the Arts, primary investigator: Dr. Doris McGinty. I helped collect archival research for a national historical theater project. 1984-1986.

PROFESSIONAL SERVICE & ASSOCIATIONS

PROFESSIONAL SERVICE

Virginia Commission for the Arts On-Site Coordinator for an Artist Residency, Richmond City Public Schools Arts and Humanities Center. *Responsibilities:* Residency Sponsor for Artist-in-residence; In charge of classroom discipline and attendance; Assisted in building logistics and artist's schedule; Served as liaison between the Center and the principal. Richmond, VA, 2001, 2008.

Music Education Curriculum Writer, Richmond City Public Schools, Richmond, VA, 1994, 2007.

Richmond City Public Schools Annual Parent Open House. Music Education Exhibit Coordinator: Assisted children in making rhythm instruments. Richmond, VA, 2005, 2007.

Accompanist, Richmond City Fire Department School Fire Safety Program, Richmond, VA, 1995 – 2012.

Undergraduate Student Representative, Howard University – Department of Music, Howard University – Washington, DC, 1983 – 1984.

HONORS AND AWARDS

Teacher of the Year-Richmond City Public Schools, 2005.

City of Richmond Fire Department Volunteer Service Award for 10 years of Fire Safety Program Participation, 2004.

Pi Kappa Lambda National Music Honor Society, inducted 1985.

Selected Choral Participant for the National Public Radio National Gallery of Art Live University Concert, 1984, 1985; Presidential Inaugural Gala, 1985; Kennedy Center Honors, 1984; *Christmas at the White House with Leontyne Price,* 1983.

1st Place Winner Georgia High School Association State Meet, Class AAA Piano Competition, 1981.

Georgia All-State Conference Piano Solo Performer, 1980.

LICENSURE AND CERTIFICATION

CITI Collaborative Institutional Training Initiative Basic Course: Human Subjects Research Curriculum Completion (2014).

State Board of Education (VA) Postgraduate Professional Teacher's License, Endorsement-Music: Vocal/Choral NK-12 and Computer Technology (2016).

Integrity and Compliance Education Certification – Virginia Commonwealth University (2015).