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## A Program Evaluation: Fidelity of Implementation of the Wilson Reading System in A Mid-Atlantic School District

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A PROGRAM EVALUATION: FIDELITY OF IMPLEMENTATION OF THE  
WILSON READING SYSTEM IN A MID-ATLANTIC SCHOOL DISTRICT

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A Dissertation

Presented to the

The Faculty of the School of Education

The College of William and Mary in Virginia

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In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

By

Amy H. Stamm

A PROGRAM EVALUATION: FIDELITY OF IMPLEMENTATION OF THE  
WILSON READING SYSTEM IN A MID-ATLANTIC SCHOOL DISTRICT

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Amy H. Stamm

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## **Dedication**

This dissertation is dedicated to all of the many people who have loved me and supported me along this journey. A very special thank you goes to my husband, Matthew and two boys, Cole and Jackson. Thank you for supporting me, pushing me to the finish, and for making many sacrifices to support my love of learning and drive to be my best. I could not have done it without your love, understanding, and support.

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## **Abstract**

Reading is at the heart of education and it is the basic skill upon which all others are built. Reading difficulties underlie much of the differences in academic achievement between students with specific learning disabilities in reading and non-disabled students; addressing these challenges when children are young is the key for long-term success (Borman, 2005; Cortiella & Horowitz, 2014; Juel, 1988; National Reading Panel, 2000; Torgesen et al., 2001). The purpose of this mixed methods program evaluation was to provide information to stakeholders about the implementation of the Wilson Reading System in the Mid Atlantic School Division (MASD). By examining the fidelity of implementation of the current program used in MASD's eight of the nine elementary schools and the three middle schools, the evaluator sought to determine the fidelity of implementation as compared to the Wilson Reading System recommended implementation methods by collecting data using a teacher interview protocol and data document reviews. Data showed inconsistencies in both Phase 1 and Phase 2 implementations. Additionally, the evaluator examined assessment data to identify students that successfully completed the program according to WADE post-assessment scores and examined that student's grade level VSOL reading score to determine if the student is able to master the grade level content after successfully exiting the program. Findings showed fidelity of implementation is vital to determine the impact linked to student outcomes in this study. Recommendations for future research and continuous program improvement included implementing fidelity checks using district personnel, implementing on-going training and a robust data collection system, and implementing reliability and validity measures of the WADE.

**A PROGRAM EVALUATION: FIDELITY OF IMPLEMENTATION OF THE  
WILSON READING SYSTEM IN A MID-ATLANTIC SCHOOL DISTRICT**

## **CHAPTER 1**

### **Introduction**

Achievement gaps between general and special education students are prevalent in almost all areas of education, beginning with reading in elementary school and ending with on-time graduation rates in high school (Child Trends Databank, 2014; Hernandez, 2011; Lesnick, George, Smithgall, & Gwynne, 2010). As a nation, systems have been put in place to ensure equity across all instruction, kindergarten through 12th grade (United States Department of Education [USDOE], 2007). The *No Child Left Behind Act* reauthorized the Elementary and Secondary Education Act in order to “close the achievement gap with accountability, flexibility, and choice so that no child is left behind” (USDOE, 2007, para. 2). This standards-based reform aimed to close achievement gaps across student groups by mandating that by 2014 all children would be reading on grade level by the time they reach third grade. Although unrealistic in nature, the grounds for such reform were based on research that showed low reading performance in third grade equates to low future outcomes (Lesnick et al., 2010). Statistics indicate approximately 7,000 students drop out of school every day and one of the most common reasons is that students do not have the literacy skills to keep up with the high school curriculum (Child Trends Databank, 2014).

Reading ability is directly linked to opportunities for academic and vocational success. In fact, adults with poor literacy skills find it difficult to function in society.

They often lack the necessary basic decision making skills and reading skills to fill out job applications and often earn an income that falls below the poverty level (Lesnick et al., 2010). This goes far beyond an “achievement gap” and becomes an “opportunity gap” where students who do not have early exposure, sufficient resources, and adequate support lack in the opportunity to learn the foundational skills, such as reading, that will aid them in being successful in life (Strauss, 2013). Moreover, when denied those opportunities, they fall behind (Strauss, 2013). This opportunity gap increases significantly for a student identified with a specific learning disability in reading does not receive instruction based on his or her need. Additionally,

constructivist theory argues that the ends of reading instruction are very much determined by the means employed to teach it. In other words, the experiences and contexts in which learning to read is embedded will be critical to each learner’s understanding of, and ability to use, reading. (Cambourne, 2002, p. 27)

Ensuring that all students have the opportunity to learn the foundational skills, as well as, become successful at learning to read is no small feat. Reading is a complex process and when students have difficulties with learning to read this adds to the layer of complexity that severely hinders the rate of success the student has with this process. Unfortunately, identifying the type of difficulty is additionally challenging, especially if the difficulty comes because of a specific disability in reading. Specific reading disabilities do not look alike, and for a student with a specific reading disability, the difficulties in reading are far more dynamic than if a child just has not learned to read yet.

Students with reading difficulties in elementary grades often have poor decoding or word-level deficits, whereas students with identified reading disabilities tend to have

decoding deficits that can be accompanied by comprehension deficits as well (Leach, Scarborough, & Rescorla, 2003). These deficits not only become an educational issue, but also an equity issue with far reaching implications for society (National Early Literacy Panel [NELP], 2008; National Institute for Literacy, 2000). Getting to root of why children have difficulties in reading and identifying very specific areas of need are key to ensuring that students receive appropriate and effective literacy instruction in order to learn how to read and then read to learn (Torgesen et al., 2001).

## **Background**

Learning to read provides the foundation for both academic and economic success. The ability to read is an essential skill that drives learning and educational attainment (Lesnick et al., 2010). In fact, those students who are competent readers, as indicated by their performance on reading tests, are more likely to perform well in other subjects, such as math and science (Jordan & Nettles, 1999). However, the National Reading Panel (2000) reports that students who experience difficulties with learning to read during their first three years of schooling must receive the appropriate intervention, or they may never become fluent readers. A layer of complexity is added when students are identified with a specific learning disability in reading and require specialized instruction in order to access the curriculum to learn to read, but may not receive it. Unfortunately, the above two circumstances are detrimental, because students who fail to possess the expected grade level reading skills tend to fall behind grade level peers, and ultimately falling behind in school creates serious consequences for life outcomes (Lesnick et al., 2010).



To better understand disparities among student groups nationally regarding reading proficiency, the National Center of Education Statistics (NCES) administers a biennial assessment to students in Grades 4 and 8 known as the National Assessment of Educational Progress (NAEP). Student performance is rated from basic, proficient, or advanced. Students who score in the basic range exhibit partial mastery of skills for grade level work whereas those who score proficient exhibit strong competencies of skills and knowledge for the grade level. In 2015, the NAEP reading results indicated that 36% of students in 4th grade and 34% of students in 8th grade were at the proficient level (NCES, 2016). Of the students assessed, only 12% of students with a disability performed at the proficient level as oppose to 40% of non-disabled students (NAEP, 2015). It is important to note that according to NCES (2016), “students with disabilities (SD) are often referred to as special education students and may be classified by their school as learning disabled (LD) or emotionally disturbed (ED)” (para. 18).

In 2013-2014, 6.5 million children ages 3-21 received special education services in the United States and of that population, 35% had specific learning disabilities (NCES, 2016). Because the term “learning disability” is used to refer to a variety of disabilities in learning, this study will focus on students who fall below the 30th percentile in reading and have a specific disability in reading. Students who fall below the 30th percentile qualify to receive instruction through the program that will be evaluated. Students with disabilities in reading are at greater risk for experiencing difficulties in the five components of reading instruction: phonological awareness, phonics, vocabulary, fluency and comprehension; given this high level of risk, it is important that schools develop a curriculum that addresses each component. Additionally, it is critical to incorporate early

intervention beginning as early as age five or no later than first grade to assist students with specific learning disabilities, and support a positive “educational trajectory” (Aron & Loprest, 2012, p. 98). One particular school district, whose concerns mirror the nation, chose a specific reading program to address the concerns over students with disabilities in reading. The next section describes the district and the program that is being used.

**Context.** The mid-Atlantic school district (MASD) serves over 11,000 students in 15 schools: 9 elementary, 3 middle and 3 high. In the fall of the 2015-16 school year the recorded enrollment was 11,597. An examination of the population demographics finds that 62% of the students are Caucasian, non-Hispanic; 18% are African-American; 10% are Hispanic; 6% are considered two or more races; and Asian, American Indian, and Native Hawaiian respectively make up less than 1% of the total number of students in the district (personal communication, September 28, 2016).

Currently, according to a small MASD’s report card, the district did not meet Federal Annual Measurable Objectives (FAMO) in Gap Group 1, which consists of students with disabilities, English Language Learners, and economically disadvantaged student populations. Furthermore, data show students with disabilities performed significantly below non-disabled peers in reading on end of year assessments for the last three school years. In the MASD, students with disabilities represent 12.8% of the total student population. Table 1 represents the district’s group pass-rate percentages in reading for students with disabilities and non-disabled students for the 2013-2016 school years.

Table 1

*District Group Pass Rates in Reading for Students with Disabilities and Non-Disabled Students*

School Year	Students with Disabilities Pass Rates	Non-Disabled Students Pass Rates	Gap in Group Pass Rates
2013-2014	48%	85%	37%
2014-2015	46%	89%	43%
2015-2016	48%	84%	38%

Data from the school years presented show a consistent gap ranging between 37% and 43% for students with disabilities, which encompasses all students with any type of disability, as compared to non-disabled peers. The consistent gap raises major concern, and therefore, taking a deeper look into the district’s current intervention used with specific learning disabilities in reading will provide insight on the effectiveness of the program and implementation of the program.

**Program Description**

The Wilson Reading System is a structured literacy program based on phonological-coding research and Orton-Gillingham principles, which requires direct and systematic instruction on the structure of the English language (O’Connor & Wilson, 1995; Wilson Language Training Corporation, 2016a). The program is designed to ensure students receive instruction through a scientific-based literacy curriculum to directly teach total word structure and phonological awareness using multisensory principles

(O'Connor & Wilson, 1995). In addition, it uses a unique “sound tapping” system to help students segment and blend sounds, as well as, a penciling technique for tracking syllable division (Wilson Language Training Corporation, 2016a).

Published in 1988 by founders Barbara and Edward, the Wilson Reading System was designed to serve as an instructional program in reading with emphasis on phonemic awareness, decoding and fluency to promote successful readers. Phonological processing involves orally manipulating the individual sounds in words and letters (Wilson & Schupack, 1997). It is mainly focused on key components that are required in successful readers and for overall reading comprehension (Wilson & Schupack, 1997). The Wilson Reading System is an intensive intervention for students in Grades 2-12 and adults who have a language-based learning disability or dyslexia who struggle to internalize the sound/symbol system for reading and spelling.

The Wilson Reading System requires that teachers be trained by a certified Wilson Reading System trainer. Teacher training consists of two levels. Wilson Reading System Level I certification is composed of an intensive instruction provided through an online forum and a practicum. This course deepens teachers' content knowledge and provides an opportunity for students to apply and practice the research-based skills through a supervised practicum (Wilson Language Training Corporation, 2016a). The Wilson Reading System Level I certification certifies teachers to teach steps one through six of the program. The Wilson Reading System Level II certification is completed upon successful completion of the Level I certification. The Wilson Reading System Level II training consists of two tracks: an online portion of advance word study instruction for steps seven through 12 and a step seven through 12 practicum; the other track focuses on

how to implement multisensory structured language instruction successfully in group settings and a group setting practicum (Wilson Language Training Corporation, 2016a). Successful completion of the four advanced courses results in a Wilson Reading System Level II certification, which means that the trained teacher may implement the Wilson Reading System to qualifying students.

In addition to a teacher-training requirement, the program implementation model follows a specific format for lesson plans in which instruction is delivered using a specific frequency and duration according to the number of students that are served in each session. The lesson plan is organized into three blocks that take approximately 30 minutes each, with constant interaction between teacher and student. The students are grouped according to pacing. For those students with low decoding ability, they tend to stay in earlier steps for several sessions, whereas other students, who quickly complete the first few steps, tend to go to material that is more complex. When grouping students, instructors need to consider the following: students who place in the 0-15th percentile for word attack are considered to be on the slowest pacing track; 16th-30th percentile for word attack are at the medium pacing level; and 30th-50th percentile for word attack are at the fast pacing level (Wilson Language Training Corporation, 2016a).

Tutoring sessions are designed to work with students' individual schedule and it is suggested that students who are in a small group of no more than six students should receive 45-minute sessions five times per week. Students who receive one-to-one instruction can receive instruction two to five times per week for 60-minute sessions. Lessons are broken into blocks and it takes approximately 90 minutes to complete an entire lesson (Wilson Language Training Corporation, 2016a). The lesson plan is

composed of ten parts, which are broken into three blocks. Block one contains parts one through five and it focuses on word study, decoding, and vocabulary. The activities include sound card quick drills where the student says the sound on the card, the instructor teaches and reviews concepts for reading, the use of word cards, wordlist reading, and sentence reading. Block two is comprised of parts six through eight which focuses on spelling and writing. The activities include quick drill reversal where the student hears the sound and writes the letter, the instructor teaches and reviews concept for spelling, and the student engages in written work dictations. In Block 3, parts nine and 10 are completed, and the student engages in controlled text passage reading and practices listening comprehension and applied skills. Controlled text passages only include concepts that students have learned or are currently working on whereas listening comprehension, the student uses current grade level texts. Each block takes approximately 30 minutes to complete and it takes 90 minutes to complete an entire lesson (Wilson Language Training Corporation, 2016a). The scope and sequence is comprised of 12 step based on six different syllable types: closed syllable, vowel consonant-e syllable, open syllable, consonant-le syllable, r-controlled syllable, vowel diagraph/diphthong syllable. The 12 step program can take up to two to three years to complete depending upon the individual student's percentile as mentioned above, pace, and success on each step of the program (Wilson Language Training Cooperation, 2016a).

The MASD began implementing the Wilson Reading System in 2013 with students in second through eighth grade who had a specific learning disability in reading. Although Wilson Reading System was not listed specifically in individual student's

individualized education program (IEP), those students who needed additional direct instruction in reading in order to access the general education curriculum were provided additional instruction using the Wilson Reading System. Candidates for the Wilson Reading System share characteristics such as:

- Unable to decode accurately (in lowest 30th percentile)
- Slow, labored reading with lack of fluency
- May know many words by sight, but have difficulty reading unfamiliar words and pseudo words
- Often guess at words
- Poor spelling (in lowest 30th percentile)
- Have a language-based learning disability in Grade 2 or higher (Wilson Language Training Corporation, 2016a).

This choice of instruction is based on identified goals tied to areas of disability. The amount of time allotted for the Wilson Reading System instruction is based on the amount of time allotted for specialized instruction in the IEPs. The program provided these students instruction that assisted them with learning fluent decoding and encoding skills to the level of mastery. From the beginning steps of the program, students received instruction in: phonemic awareness; decoding and word study; sight word recognition; spelling; fluency; vocabulary; oral expressive language development; comprehension in small group or one-on-one settings from a trained Wilson Certified instructor in the district.

The Wilson Reading System uses an assessment known as the Wilson Assessment of Decoding and Encoding (WADE) to measure student growth and progress. In the

MASD, teachers rely on the WADE to give them a sense of how students are progressing and it is used to show successful completion of the Wilson Reading System when a student scores 80% or higher on the post-test. The question becomes if a student in the prior three years of implementation successfully completed the Wilson Reading System as measured by the WADE, do they have the foundational reading skills necessary to master grade level reading content as measured by the end-of-year grade level reading Virginia Standards of Learning (VSOL) assessment?

**Theory.** Program theory describes the evaluation and, what is being evaluated (Mertens & Wilson, 2012). A logic model provides a structure for describing or illustrating the logical relationships among program elements and the problem to be solved which ultimately defines measurements of success (Mertens & Wilson, 2012). Figure 1 illustrates the logic model for the Wilson Reading System, which helps to define if and why this program will achieve the desired outcomes of the program and explain the theory of change.



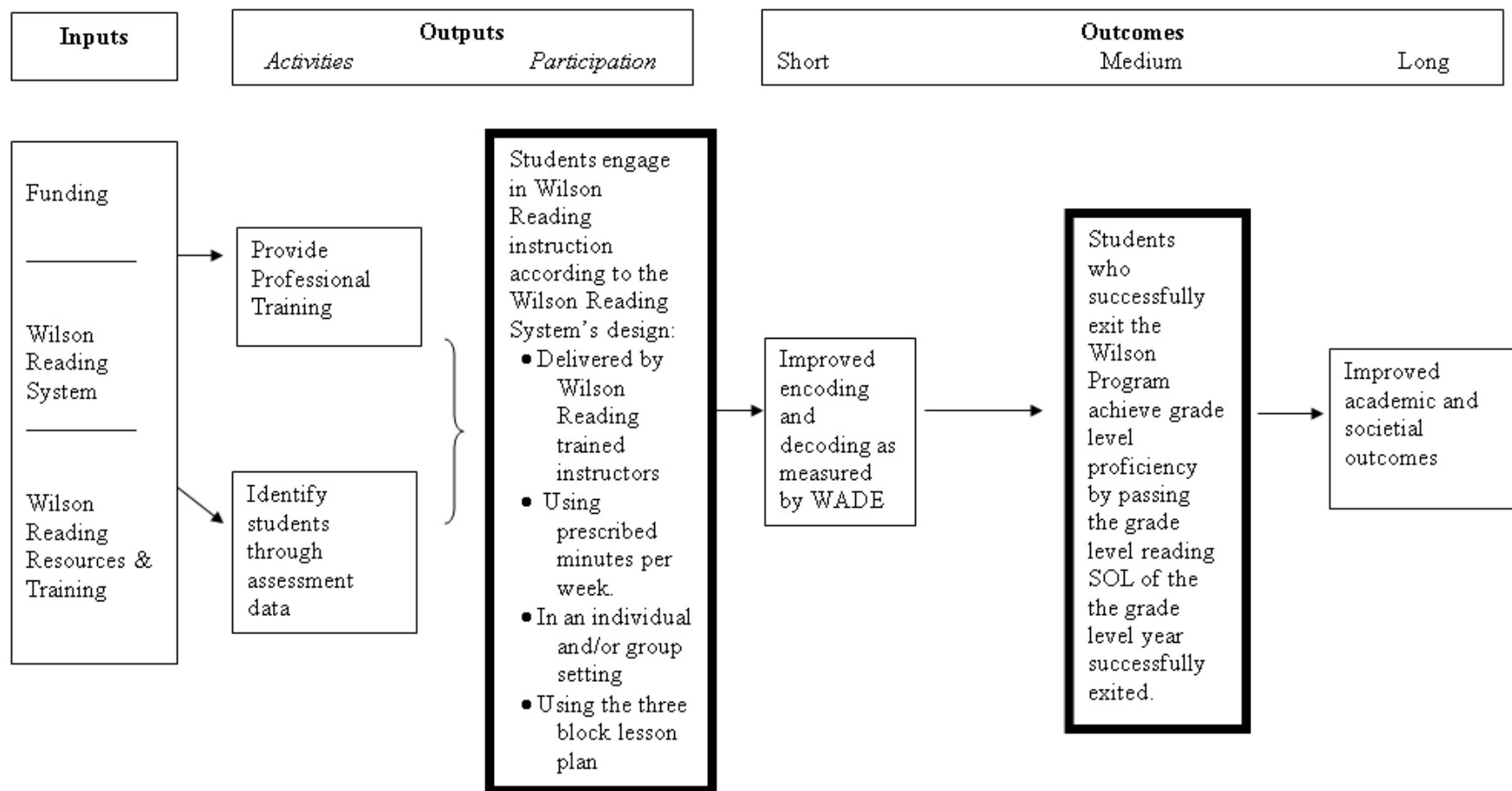


Figure 1. A logic model for the MASD's implementation of the Wilson Reading System. Following the model proposed in *Evaluation Theory, Models, & Applications*, by D. Stufflebeam and A. Shinkfield, 2007.

## **Statement of the Problem**

Reading is at the heart of education and it is the basic skill upon which all others are built. Reading difficulties underlie much of the differences in academic achievement between students with specific learning disabilities in reading and non-disabled students; addressing these challenges when children are young is the key for long-term success (Borman, 2005; Cortiella & Horowitz, 2014; Juel, 1988; National Reading Panel, 2000; Torgesen et al., 2001). The process of learning to read is highly complex and for a student with a specific disability in reading, the level of complexity becomes even higher. Learning to read, as a student with a specific learning disability in reading, requires an understanding of the area of the disability; an understanding of cognitive processing, such as executive functions and self-regulation; and an understanding of the appropriate interventions to support the area of need so the student can successfully learn (Vaughn, Wanzek, Murray, & Roberts, 2012).

Given the poor long-term outcomes for students with learning disabilities who fail to achieve proficiency in reading, this is truly a problem of practice that impacts every level of American society from the individual to the local, state, and national levels (National Reading Panel, 2000; Shelley-Tremblay, O'Brien, & Langhinrichsen-Rohling, 2007). This is also an issue of equity and therefore, it is imperative to determine what interventions will help support students to not only close the gaps in learning, but to also close the gap in developing a major life skill (Cortiella, 2006; Fuchs & Fuchs, 2006; Swanson, 1999; Swanson, Carson, & Sachse-Lee, 1996; Vaughn & Swanson 2015).

## **Purpose of the Study**

The purpose of this study was to provide information to stakeholders about the implementation of the Wilson Reading System in the MASD. By examining the fidelity of implementation of the current program used in MASD's eight of the nine elementary schools and the three middle schools, the evaluator sought to determine the fidelity of implementation as compared to the Wilson Reading System recommended implementation methods. Additionally, the evaluator examined assessment data to identify students that successfully completed the program according to WADE post-assessment scores and examined that student's grade level VSOL reading score to determine if the student is able to master the grade level content after successfully exiting the program.

The nature of the implementation evaluation was formative, focusing on the processes and identifying strengths and challenges in the implementation, as well as, medium-term outcomes (Mertens & Wilson, 2012). Sidani and Sechrest (1999) explain that an implementation evaluation, also called a process evaluation, consists of the theoretical components of a program that are believed to be responsible for producing anticipated results. The implementation evaluation should consist of process variables that represent the dosage, the quantity of the program services that should be given (Sidani & Sechrest, 1999). Dosage is represented by frequency, which refers to the number of times the program services should be given over a specified amount of time, and duration, the total amount of time the implemented services must occur to ensure the expected results (Stufflebeam & Shinkfield, 2007).

The findings of this implementation evaluation will be used by district and building level staff to determine what changes to the program, if any, need to be made to the implementation of the Wilson Reading System in the district. Additionally, the implementation evaluation will assess the extent to which the appropriate resources were available; determine the quality of the services provided; and determine if additional resources or supports are needed to support students to mastering grade level content in reading upon successful completion of the Wilson Reading System (Mertens & Wilson, 2012).

### **Evaluation Questions**

Using the framework of Wilson Reading System's implementation and instructional model, the evaluator will use the CIPP model to guide the processes and products data collection (Stufflebeam & Shinkfield, 2007). The CIPP model of evaluation uses the use branch theory within the pragmatic paradigm. The pragmatic paradigm's methodology assumes that the method of study should match the purpose (Mertens & Wilson, 2012). Because the CIPP model is more flexible than traditional evaluation models, it allows the evaluator to focus on a comprehensive and systematic examination of the educational program (Stufflebeam & Shinkfield, 2007). Therefore, the CIPP model is the appropriate evaluation tool to use with this formative evaluation of the Wilson Reading System.

For the purpose of this program evaluation, the evaluator used Wilson Reading System's framework for implementation when evaluating the processes and outputs to see if identified students receive instruction as recommended by the Wilson Reading System from a Wilson Reading System trained and certified teacher. Additionally, the

evaluator examined if the student received the prescribed minutes per week according to an individual and/or group setting, using the three-block lesson plan as recommended by the Wilson Reading System. If students received the Wilson Reading System instruction as intended, then they will improve encoding and decoding as measured by the WADE. If they improve encoding and decoding and successfully exit the program, then they will be proficient readers as measured by the VSOL of the grade level in which they successfully exited the program. This evaluation study will address the following questions:

1. How does the reading program that was implemented over the last three years align to the implementation model suggested by the Wilson Reading System?
2. How does the program as it is currently implemented align with the implementation model suggested by the Wilson Reading System?
3. Of the students who successfully exited the Wilson Reading System according to the WADE during the first three years of implementation, what percentage scored proficient on the Virginia Standards of Learning reading assessment?

### **Definition of Terms**

**Comprehension.** The ability to make meaning from text (National Reading Panel, 2000).

**Decoding.** The ability to pronounce a word by applying knowledge of letter and sound correspondences and phonetic generalizations (Wilson Language Training Corporation, 2016a).

**Encoding.** The process of using letter name/sounds to write. Also known as the process of Spelling (Wilson Language Training Corporation, 2016a).

**Fidelity of Implementation.** The degree to which a program is implemented as intended by the program developer (Mellard & Johnson, 2008).

**Fluency.** Reading accurately, quickly and with expression (National Reading Panel, 2000).

**Phonemic awareness.** The ability to focus on and manipulate phonemes in spoken words (National Reading Panel, 2000).

**Specific Learning Disability.** A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations (Cortiella, 2006; Cortiella & Horowitz, 2014; Herr, 1999).

**Tier 1 Intervention.** The first level of intervention that provides high-quality instruction and behavioral supports in general education to all students (National Joint Committee on Learning Disabilities [NJCLD], 2005).

**Tier 2 Intervention.** A level of intervention that provides instruction that is more specialized for students whose performance and rate of progress lag behind classroom peers (NJCLD, 2005).

**Tier 3 Intervention.** A level of intervention, the most intensive intervention, that often results in a comprehensive evaluation by a multidisciplinary team to determine if the student has a disability and is eligible for special education and related services (NJCLD, 2005).

**Virginia Standards of Learning (VSOL).** The minimum expectations for what students should know and be able to do at the end of each grade or course. The annual assessments provide information on individual student achievements (VDOE, 2015).

## **CHAPTER 2**

### **Review of the Related Literature**

The American education system is committed to providing equal opportunities for achievement to all students, regardless of background, gender, race, or ability level. Ensuring that students of differing backgrounds and abilities have access to the general curriculum and the options it provides for the future is critical not only for individual success, but also for the continued success of society. About 5% of our nation's school age students are formally identified as having a specific learning disability (Cortiella & Horowitz, 2014). A major challenge facing education today is ensuring that students with disabilities in reading receive the best and most effective instruction to meet their individual needs.

Over the past two decades there has been a plethora of legislation and federally funded "special," "compensatory," and "remedial" education programs designed to ensure educational success for students with learning difficulties (Will, 1986, p. 411). However, there are no universal methods for developing appropriate inclusive models or programs for students with disabilities, because every student requires individualized instruction (Mitchell & Kugelmass, 1997; NJCLD, 2005). Therefore, an extensive review of the literature will focus on understanding reading as a whole in order to understand how to effectively support students with disabilities in reading to success through a deeper understanding of the stages of reading



development, types of reading disabilities, effective interventions and strategies for supporting students with disabilities in reading, and fidelity.

## **Reading**

Reading is a complex process that begins with the development of early reading behaviors that become a network of strategic activities for reading increasingly challenging texts (Fountas & Pinnell, 2012). Richardson (2009) states that there are four key stages that children progress through in learning to read: emergent, early (or beginning), transitional, and fluent. The stages of reading development occur differently for students as they progress through and develop their reading skills, and for those students who have delays or deficiencies in one or more of the five areas of reading, the differences in reading development are greater (National Reading Panel, 2000).

**Pre-emergent stage.** For students who are not yet ready to be readers, the pre-emergent stage is the initial stage of reading development (Richardson, 2009). Pre-emergent students are children who do not yet know most of the letters of the alphabet or an understanding of letter sounds, they do not yet have an understanding of early concept of print ideas such as the concept of a letter, and that print goes from left to right (Richardson, 2009). Once students are able to independently write their first name, identify at least 40 uppercase and lowercase letters, demonstrate left-to-right directionality, and hear at least 5 consonant sounds, they are ready to move on to the emergent stage of development (Richardson, 2009). In order for pre-emergent and emergent students to become successful readers, they must demonstrate phonological awareness and alphabet knowledge (Adams, 1990). Alphabet knowledge involves

understanding letter names, letter sounds, and the meaning that letters carry (Teale & McKay, 2015).

**Emergent stage.** Phonological awareness is “an awareness of various speech sounds such as syllables, rhymes, and individual phonemes” (Bear, Invernizzi, Templeton, & Johnston, 2016, p. 416). A part of developing phonological awareness in the emergent stage is going through the Concept about Print (CAP) and the different stages of developing their skills in Concept of Word in Text (COW-T; Bear et al., 2016; Richardson, 2009).

The progression takes the emergent reader through the developing COW-T level, to the rudimentary and firm COW-T levels, a student who experiences delays in these basic phonological skills will have difficulties moving to the beginning reader stage where they will begin to decode words in text (Blackwell-Bullock, Invernizzi, Drake, & Howell, 2009; Torgesen, 2004). Additionally, students with learning disabilities in reading are more likely to have reading difficulties when they enter kindergarten because they lack “sufficient phonological processing skills and fail to develop adequate work reading ability” (Lyon et al., 2001, p. 271). In these cases, it is necessary to teach phonological awareness and total word structure directly and systematically in order to improve in their basic reading and spelling skills (Adams, 1990; Lyons, 1995; Snow, 2002; Snow, Bums, & Griffin, 1998; Stahl, Osborne, & Lehr, 1990; Stanovich, 1986; Vaughn & Fuchs, 2003; Wilson & Schupack, 1997). The National Reading Panel (2000) contends that reading requires both the recognition of words and the construction of meaning for those words. Stahl (1986) notes the average child may know 45,000 words by the completion of high school, which means that a child must learn approximately

3,000 new words each year. However, a majority of these words come from written text versus oral discussion, and children who cannot read do not make this growth in vocabulary development, which results in being further and further behind (Stanovich, 1986).

In order to be successful at reading, students must be able to use phonemic awareness, phonics, fluency and vocabulary to make meaning of text (National Reading Panel, 2000). Phonological interventions will assist students with improving reading fluency in which helps to improve comprehension and overall reading achievement (Foster & Miller, 2007).

**Beginning reader stage.** As one moves from the emergent stage to the stage of a beginning reader, a reader begins to gain some automaticity in their ability to recognize high frequency words. They also begin to refer to illustrations for reading support and they start to notice that what they read aloud should sound like it is in the appropriate syntax (Richardson, 2009). Early readers start to connect some of their background knowledge and experiences to what they read in order to make simple predictions and give a basic retelling of the book's content. For those students with little to no opportunity to develop background knowledge, their ability to connect to reading is negatively impacted (Editorial Projects in Education Research Center, 2011). Therefore, unless these children receive the appropriate instruction, more than 74% of the children entering first grade who are at-risk for reading failure due to lack of opportunities, will continue to have reading problems into adulthood (Lyon, 2003).

**Transitional reader stage.** From the transitional reader stage, readers transition to the fluent stage of development (Richardson, 2009). In the fluent stage of reading

development, readers have internalized an effective network of strategic actions that allow them to process text, without breaking down the flow of their reading to solve words in isolation. They automatically use a variety of sources of information in the context of continuous text (Fountas & Pinnell, 2009). At this point, readers are considered to be proficient because they have a keen sense of self-monitoring and self-correcting with both their process of reading and their comprehension of what they are reading (Richardson, 2009). These readers are ready to be challenged with more sophisticated texts and a wide variety of genres with expectations for deeper comprehension because they are able to read fluently, with intonation, expression, accuracy, and at a good rate of speed while tapping into their background knowledge to make sensible predictions, inferences, and draw conclusions from the text (Richardson, 2009). Unfortunately, 67% of students with reading disabilities have decoding deficits with or without an accompanying comprehension deficit, and therefore, may not reach the fluent stage of reading development without intense intervention that supports the specific areas of growth necessary to be a proficient reader (Leach et al., 2003). Additionally, students with a learning disability in reading may also struggle with self-regulation, which also severely hinders his or her ability to reach the fluent stage (Vaughn et al., 2012).

Becoming a good reader is critical to learning, not only for school achievement, but also for post-secondary education opportunities and success in life (Adams, 1990; Lyon, 1995; National Reading Panel, 2000). Therefore, for students with disabilities in reading, it is imperative that special education programs understand the complexity of

reading in order to examine the effective components of intervention that support and maximize learning for these students (Mitchell & Kugelmass, 1997).

### **Students with Learning Disabilities**

Federal legislation regulating special education services in public schools defines a learning disability as “a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations” (Child Trends Databank, 2014). A learning disability may exist when a child’s level of achievement is substantially below what is expected by their intelligence level or ability to learn (Catts & Hogan, 2003; Torgesen, 2004). Three main types of disabilities can classify students with learning disabilities: difficulty in reading, difficulty in writing, and difficulty in math. Although the causes of learning disabilities are not clear, evidence indicates that genetic factors; use of alcohol, tobacco, and drugs during pregnancy; and environmental toxins are influences that have been related to problems associated with information processing in the brain associated with learning disabilities (Catts & Hogan, 2003). As a result, learning disabilities can be a life-long condition that impacts one’s education, employment, family life, and daily routines. However, despite limitations associated with learning disabilities, people with learning disabilities can learn if they are provided with quality instruction and given the opportunity (Catts & Hogan, 2003). The challenge remains in truly understanding the specific learning disability and the instruction that is most responsive to successful learning.

When examining disabilities in reading specifically, there are three types that overlap, but can be separated and distinct areas: specific word recognition deficits

(SWRD) which relates to a phonological deficit and process speed/orthographic speed deficit; specific reading comprehension deficit (SRCD); and mixed disabilities in reading (Cutting et al., 2013; Moats & Tolman, 2009). Many students with significant learning disabilities in reading have underlying neurological or information processing disorders, difficulties with executive functioning, or self-regulation issues that hinder their success with learning (Cutting et al., 2013; Vaughn et al., 2012).

Dyslexia is a neurological disorder that directly relates to difficulties in phonological processing, spelling, and decoding (Lyon, 1995). It is a more intense and persistent disability that is characterized by difficulties in expressive or receptive, oral or written language (Council for Exceptional Children, 2000). Approximately 70-80% of poor readers have trouble with phonological processing which negatively affects accurate and fluent word recognition, about 10-15% of poor readers struggle with speed in word recognition, and another 10-15% can decode words, but lack the ability to comprehend passages (Moats & Tolman, 2009).

Levels of executive functioning and cognitive processing influence comprehension deficits. Cognitive processing difficulties affect a student's short-term memory and working memory. Laurie Cutting and her colleagues (2013) conducted specific research in examining executive skills and reading comprehension through neuroimaging of children. The results showed that the brain function of those with specific reading comprehension deficits (SRCD) is quite different and distinct from those with dyslexia. Abnormalities were seen in the occipital-temporal cortex, a part of the brain that is associated with successfully recognizing words on a page, for those with dyslexia. Those with SRCD did not show abnormalities in this region, but did show

abnormalities in regions typically associated with memory (Cutting et al., 2013). This evidence supports the overarching challenges that arise when supporting students with specific disabilities in reading. A “one-size fits all” approach does not work, for no one disability is like another.

Working memory and inference making directly contribute to reading comprehension. Poor working memory affects the reader’s ability to integrate meaning from what was read, to make inferences from short or long text, and read for understanding (Vaughn et al., 2012). Therefore, the issues with memory tasks cause students with disabilities in reading to struggle with reading comprehension and building the foundational skills in reading (Vaughn et al., 2012). Intervention programs must be designed to address a mix of disability areas. Educators have to consider the most sufficient instructional delivery method and ensure that students receive adequate instructional time (Vaughn et al., 2012).

### **Methods for Supporting Difficulties in Reading**

There are methods and strategies that support students overcoming difficulties in reading. When it comes to interventions, such strategies as developing small groups, modeling guided reading to struggling readers, providing manipulatives to enhance essential understanding, and continually monitoring student progress can make a positive impact on student achievement (Fuchs & Fuchs, 2006). When teachers base instruction on students’ understandings within a small group format, it has a positive correlation to student growth (Fisher, Frey, & Hattie, 2016). Jennifer Serravallo (2010) explains that small group time is also a way of pulling together students who need extra support with certain aspects of reading such as:

- Using a decoding strategy
- Applying a comprehension strategy
- Practicing reading fluency
- Writing in response to reading

Additionally, understanding cognitive processing, ensuring instructional time and intensifying instructional delivery through explicit, systematic instruction are effective with improving student success in learning (Vaughn et al., 2012).

**Direct instruction.** Students' responses to different types of instruction have been under review for several years (Fuchs & Fuchs, 2006; Swanson, 1999; Swanson et al., 1996; Vaughn & Swanson, 2015). Over the last two decades, educators have put a major emphasis on using explicit, effective, and systematic instruction to address and identify weaknesses in academic skills (Vaughn et al., 2012). This shift in intensifying instructional delivery, versus providing treatment for a disability independently of academic learning, produced greater results. Fisher and colleagues (2016) explained that direct instruction requires that the teacher set clear learning targets and provide students with practice on each target. Educators are able to blend self-regulation strategies with explicit instruction, scaffold material, and then systematically break complex skills into smaller, more manageable "chunks" of learning (Vaughn et al., 2012). Additionally, these practices increase the opportunities for students to practice, respond, and receive feedback from the teacher frequently. Increasing the frequency of student response assists teachers with monitoring student understanding and it increases teacher feedback (effect size .75) while the student is refining and mastering new skills (Fisher et al., 2016; Vaughn et al., 2012).



Torgesen et al. (2001) examined the effects of the Wilson Reading System on decoding, fluency, and reading comprehension with 772 third and fifth graders, using the Woodcock Reading Mastery Test-Revised (WRMT-R). Their study found that through the direct and systematic approach that the Wilson Reading System uses to deliver explicit instruction, there was a significant increase on word attack and word identification scores. These findings are one of many that supports the need to provide students with disabilities in reading with intensive, systematic, and explicit instruction in word-level skills consistently over time in order to make adequate progress (Cortiella, 2014; Torgesen et al., 2001; Vaughn & Fuchs, 2003).

The National Reading Panel (2000) reported more positive outcomes for students who receive direct instruction in decoding skills that focus on the alphabetic code than for those who use a context-emphasis or embedded approach. Swanson et al. (1996) synthesized 78 studies that were published between 1967 and 1993, focusing on students between the ages of six to 18; the researchers identified effective instructional approaches for students with learning disabilities. From the results, a higher effect size was discovered for two instructional approaches over others: direct instruction was .91 and 1.07 for strategy instruction (Swanson et al., 1996). These findings are the premises of special education and are why specialized instruction is required for students with disabilities.

**Strategy instruction.** Strategy instruction is a method of instruction that teaches cognitive strategies to guide and support students with accomplishing a specific task or skill, as well as, perform higher-level skills such as generating questions while reading (Rosenshine, 1995; Serravallo, 2010). This type of instruction uses strategies as “goal-

directed attempts to control and modify the reader's efforts to construct meaning of texts" (Afflerbach, Pearson, & Paris, 2008, p. 368). It is generally used to teach strategies to increase comprehension and is an instructional approach that increases achievement for students with disabilities either alone or in combination with direct instruction. In fact, interventions delivered through direct instruction and strategy instruction produced the highest effects (Vaughn et al., 2012). Harvey and Goudvis (2007) emphasize that strategies are not the goal, but a means to understanding.

Students with disabilities in reading who have difficulties with self-regulation have difficulties with cognitive processing and often demonstrate lower academic learning (Vaughn et al., 2012). When explicit strategy instruction is used, metacognition is taught and the variety of metacognitive strategies support students to becoming thinkers and better performers (Vaughn et al., 2012). In fact, Nelson and Manset-Williamson (2006) found that integrating explicit comprehension strategy instruction into the classroom produced noteworthy results for students with disabilities in reading as compared to the control group. Strategy instruction requires the teacher to know the student's specific area of difficulty in reading, to overtly teach the steps and processes needed to apply a strategy. When this is done successfully, students are able to self-regulate and assume responsibility for their own learning. This not only has a positive impact on performance, but it also increases the student's positive affect toward reading (Vaughn et al., 2012).

**Multi-sensory instruction.** Multi-sensory instruction is a type of direct instruction method that uses a multi-sensory approach to learning. A multisensory approach uses the visual, auditory, and kinesthetic modalities, which are taught

simultaneously, to serve as an early intervention (Bertin & Perlman, 2001; Wilson & Schupack, 1997). Dr. Samuel Orton and Dr. Anna Gillingham pioneered the multi-sensory approach to reading instruction. The Orton-Gillingham method, a language-based, systematic approach to instruction, uses a multi-sensory approach to support students with dyslexia in accessing the left hemisphere of the brain in order to understand simple to more complex phonetic concepts and word and syllable patterns (Sheffield, 1991). The Orton-Gillingham approach teaches the basics of word formation through visual, auditory, and kinesthetic learning styles (Sheffield, 1991; Wilson & Schupack, 1997).

A multi-sensory approach allows a student to use more than one sense to map sounds onto letters, they strengthen the connection between sounds and the letters that represent them and in turn, gain proficiency and fluency with printed text of the English language (Wilson & Schupack, 1997). Additionally, through this approach, students internalize the complex code of the English language, allowing them to automatically make the connections to sound and text (National Reading Panel, 2000). Allington (2009) adds that as students develop automaticity with sight words and independent use of decoding strategies, fluency improves. By mastering the concept of automaticity, students are able to use little to no effort to meet the goal of reading stories and informational texts quickly and accurately while making meaning of what was read (Adams, 1990). The Wilson Reading System's design provides single word automaticity and fluency with connected text so students work on fluency, vocabulary, and comprehension in each lesson (Wilson Language Training Corporation, 2016a). Through the use of targeted small group of approximately five to seven students, direct instruction is provided for

about 30-minutes, five days per week. This direct instruction provides a sequence of presentations for the teacher to use, along with a provided script of statements (Wilson Language Training Corporation, 2016a). As a result, this program supports the development of the foundational skills through the intersection of the five critical components of reading using a systematic approach based on scientific research.

**Wilson Reading System.** Evidence of the Wilson Reading System's effectiveness is reported on the Wilson Language Training Cooperation (2016a) website in the form of publications conceptualizing the process of delivering the Wilson Reading System and evidence from case studies. However, there is limited evidence in the form of peer-reviewed journals. Although several case studies are reported, the What Works Clearinghouse (WWC) only deemed one study effective in meeting evidence standards (Institute of Education Sciences [IES, 2007]). In order to meet evidence standards, a study has to be a quasi-experiment or randomized controlled trial with one of the following three designs: regression discontinuity designs; single-case designs, or quasi-experiment with equating (IES, 2007).

WWC looked at 28 studies of the Wilson Reading System for students with reading disabilities published or released between 1989 and 2009 (IES, 2007). There was not enough evidence to support that the Wilson Reading System has a positive or negative effect on improving reading with this student group; however, when looking at the effectiveness with the components of reading, one study out of the nine examined met evidence standards for alphabetics. The study conducted by Torgesen et al. (2006) on the effectiveness of four reading interventions used data collected on 772 students in third and fifth grade across 27 school districts in Pennsylvania during the 2003-2004 school

year. Of the 772 students, 162 used a modified version of the Wilson Reading System that only included word reading instruction. WWC found statistically significant evidence, with effect sizes at  $r^2 = 0.59$  and  $r^2 = 0.29$  for third and fifth grade respectively, of potentially positive effects of the Wilson Reading System as a result of the Woodcock Reading Mastery Test-Revised (WRMT-R) word identification and word attack subtests and the Test of Word Reading Efficiency (TOWRE) phonetic decoding and sight word efficiency subtests (IES, 2007).

The MASD chose the Wilson Reading System program as a remedial intervention for students with specific learning disabilities in reading. Other Orton-Gillingham multisensory-based programs such as Lindamood-Bell Learning Processes (LBLP) and the Barton Reading Program are similar to the Wilson Reading System as they use a multisensory approach to learning, yet each program holds unique characteristics. For example, Lindamood-Bell is a clinically based reading intervention approach that began in the late 1960s. It was designed to compensate for reading disabilities with unreliable auditory perceptions. The LBLP differs from the Wilson Reading System in that Wilson uses a “sound tapping” method, whereas LBLP teaches alternate ways to perceive the various sounds (phonemes) that make up all of the words in the English language (American Federation of Teachers, 1999). The LBLP has been adapted to include a school-based early intervention program known as the Human Learning Model. There is very little research on the effectiveness of this model at this time.

The Barton Reading Program is another Orton-Gillingham multisensory-based program that is similar to the Wilson Reading System program. The Barton Reading Program aligns more closely with the LBLP in that it supports students with auditory

processing disorders (Rosen, 2017). Students must be able to tell the differences between sounds in order to use the program, whereas the Wilson Reading System is designed to teach the sounds. The program is delivered in an hour session, typically one-on-one. There are 10 levels and each lesson has 18 steps. Like the Wilson Reading System, the program is scripted (Rosen, 2017). Additionally, similar to the Wilson Reading System, the Barton program uses a pre- and post-test assessment for progress monitoring. The studies cited here reviewed outcomes for students. They did not, however, examine fidelity of implementation of the strategies. This study focuses on fidelity of implementation. It is difficult to make inferences about the effectiveness of a program without understanding the degree to which the program is being implemented with fidelity.

### **Fidelity**

Fidelity of implementation is “the degree to which teachers and other program providers implement programs as intended by the program developers” (Mellard & Johnson, 2008, p. 240). According to Mellard (2009), there are five key elements of fidelity: adherence, exposure/duration, quality of delivery, program differentiation, and student responsiveness/engagement.

Following procedures as described, and implementing all pieces of the intervention in the correct order is adherence. Exposure/duration refers to the dosage of implementation with the intervention for the prescribed length of time and frequency. Teacher practices and quality of each component refers to the characteristics of quality of delivery. Program differentiation examines if the intervention is clearly defined and is implemented without any contamination from other programs. Student engagement

measures how actively engaged are the children who participated in the intervention (Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008).

Positive student outcomes are dependent upon fidelity of implementation (Dane & Schneider, 1998). Schools choose evidence-based reading programs that are proven to support students in specific areas of need; however, changes to implementation at the teacher and student level impact the program's effectiveness. Wilson Reading System is a scientifically based, systematic, explicit instruction model that, as mentioned, has a very specific implementation framework. Implementing the program to fidelity is vital to overall success. To implement a program to fidelity, one must understand how to implement the program as intended; gather and organize resources necessary for implementation; and adhere to implementation procedures of the practice or program (Mellard, 2009). Adhering to fidelity of implementation helps to determine the effectiveness of the intervention and links student outcomes to instruction (Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008). This is crucial when evaluating a program's effectiveness, especially, when the program is prescribed as a specific intervention to support specialized instruction based on need or a disability. If the program is implemented to fidelity according to the program's specifications, then the student success rate should be high in terms of successfully exiting the program and reading on grade level.

### **Summary**

Federal investments authorized under ESSA and IDEA continues to reflect a commitment to early childhood education and special education. However, those federal investments are defensible only if they lead to practices that improve the quality of

services and outcomes for these individuals. Since there is a greater risk for students with disabilities in reading to experience a deficit in one of the five areas of reading, it is imperative that school districts utilize an instructional program comprised of highly effective instruction and strategies to support the specific area of need. Because reading is a complex skill that involves the integration of complex components, implementing scientifically based, systematic instructional programs that use a direct instruction approach will be instrumental in supporting students with disabilities to mastery of basic reading skills (National Reading Panel, 2000). Through this program evaluation of the Wilson Reading System, it was important to examine what is currently in place in the MASD to determine the program's effectiveness with supporting students with specific learning disabilities in reading to acquiring the necessary skills to read grade level content proficiently. By looking at the data from pre- and post-WADE assessments, the frequency and duration of instruction delivered, and the academic achievement on the end-of-year grade level reading VSOL, this study hoped to inform the MASD on the effectiveness of the Wilson Reading System when used with students with disabilities in reading.



## **CHAPTER 3**

### **Methods**

This chapter provides descriptions of the evaluation approach, participants, instrumentation, limitations, delimitations, and methods of data collection and analysis used in this study. The purpose of this program evaluation study was to investigate the way in which the MASD and its Wilson Reading System teachers implemented Wilson Reading System over the last three school years (Phase 1) and the current school year (Phase 2) of implementation. The terms Phase 1 and Phase 2 are used because during Phase 1 the district used three trained Wilson Reading System teachers to deliver instruction to eight of the nine elementary schools and two of the three middle schools. During Phase 2, the district provided training to district teachers to allow the eight elementary schools and the two middle schools to have at least one trained Wilson Reading System teacher in the building to deliver the instruction. Additionally, this study investigated the grade level performance in reading of those students who successfully exited the program. The Wilson Reading System supports students with specific learning disabilities in reading so they may access instruction that promotes their overall reading success.

Fidelity of implementation was the primary focus of this study. Therefore, the evaluator reviewed Phase 1 and Phase 2 Wilson teacher schedules to determine if fidelity of implementation is aligned to the recommended Wilson Reading System implementation model. Additionally, individual interviews were conducted with each

Wilson teacher from Phase 1 and Phase 2 of implementation to examine teacher training, the number of students served in a session, the number of minutes per session, and the lesson plan used in each session.

In addition to reviewing Phase 1 and Phase 2 to determine fidelity of implementation, the evaluator reviewed VSOL and WADE assessment data. The evaluator analyzed student achievement data for students with specific learning disabilities in reading who received instruction through the Wilson Reading System during the 2013-2014, 2014-2015, and 2015-2016 school years to see which students successfully exited the Wilson Reading System program as measured by the WADE post-assessment. After identifying students who successfully exited, the evaluator reviewed end-of-year VSOL reading assessment data to determine if the student was successful on content level material by receiving a scaled score of 400 or greater for that year's grade level.

### **Evaluation Questions**

This evaluation study addressed the following questions:

1. How does the reading program that has been implemented over the last three years align to the implementation model suggested by the Wilson Reading System?
2. How does the program as it is currently implemented align with the implementation model suggested by the Wilson Reading System?
3. Of the students who successfully exited the Wilson Reading System according to the WADE during the first three years of implementation, what percentage scored proficient on the Virginia Standards of Learning reading assessment?

## **Overview of the Evaluation Approach**

The Wilson Reading System evaluation used a mixed methods approach, focusing on fidelity of implementation. Additionally, the program evaluation examined student performance for students who successfully exited the Wilson program as measured by the WADE assessment and the Reading VSOL achievement outcomes. Ultimately, the goal of the evaluation was to see how the program is working and how students are performing once they exit the program.

Daniel Stufflebeam's CIPP model will guide the data collection for this study (Stufflebeam & Shinkfield, 2007). This model of evaluation is one that supports the gathering of information through the four components, "context, input, process, and product" which is useful for making decisions in a program evaluation (Mertens & Wilson, 2012; Stufflebeam & Shinkfield, 2007). The program has been in place in the district for three years; therefore, not all components of the CIPP model will be used in this evaluation. The evaluator focused on the process and medium-term outcomes, evaluating fidelity of implementation, as well as, examined student data for those students who have successfully exited the program. This approach allowed the evaluator to determine "what is needed to make the program work, the extent to which the program is being implemented as planned, and what the outcomes are" so that information may be used to improve the program (Stufflebeam & Shinkfield, 2007; Mertens & Wilson, 2012, p. 92).

**Participants.** Participants included the MASD's three Wilson Reading System teachers from Phase 1 of implementation and the MASD's eight Wilson Reading System

teachers from Phase 2 of implementation. All of the teachers in Phase 1 and Phase 2 were Level I certified trained through the Wilson Language Corporation Training. This program evaluation examined the frequency and duration of instruction delivered by the teachers in Phase 1 and Phase 2 to the 113 students who were served through the Wilson Reading System. The 113 students are students who were identified as a student with a specific learning disability in reading and their grade levels range from second grade to eighth grade during both phases of implementation. Any student identifying data, such as state testing identification (STI) numbers and other personal identifying information were destroyed upon completion of the study.

### **Data Sources**

A mixed methods approach utilizes a combination of quantitative and qualitative data (Mertens & Wilson, 2012). Qualitative data were collected in the form of interviews of teachers who implemented the Wilson Reading System over the three years in the MASD. In addition, Wilson teacher schedules from Phase 1 and Phase 2 of implementation were examined. Upon gathering the schedules from each individual Wilson teacher, the schedules were compiled into an electronic Word document chart. Student identification information was listed in separated boxes of the chart on the right side of the word document. Across the top of the document, the titles student and school are listed, along with the three different school years. On the second line, number, grade, frequency, WADE post-test titles are listed under each of the three school years for Phase 1. For the Phase 2 school year, grade and frequency titles are listed. See Appendix A for a sample of the chart.

Quantitative analysis was used to examine the WADE post-test scores data to determine who successfully completed the Wilson Reading System during the first three years of implementation. Additionally, once the students who successfully completed the Wilson Reading System were identified, the VSOL data, provided in a comma-separated values (CSV) Excel file, were used to determine which of those students have a 400 scaled-score or higher on the corresponding grade VSOL reading assessment.

**Interview.** Qualitative data were gathered through face-to-face teacher interviews with the Wilson Reading System teachers in MASD. An interview protocol was used to ask questions and record answers during the qualitative interviews (Creswell, 2003). Creswell (2003) recommends that an interview protocol include:

- a heading, listing a date, place, interviewer, and interviewee;
- instructions of standard procedures for the interviewer to follow;
- the questions, starting with an ice-breaker question and then four to five research questions;
- probes for each question to follow-up and ask individuals for further elaboration on a topic;
- spaces for recording responses between questions;
- a final thank you statement to acknowledge the time spent in the interview (p. 194).

The interview protocol (Appendix B) used open-ended questions to elicit information, views, and opinions from the participants (Creswell, 2014). Table 2 illustrates the alignment of the interview questions to the Wilson Reading System's recommendations for implementation.

Table 2

*Wilson Framework and Interview Question Correlation Chart*

Wilson Framework	Interview Questions
Staff Training	1. Describe the training that you received to implement the Wilson Reading System program. After you went through this training, what was your understanding of what you would have to do to implement the program with fidelity?
Number of Students Served	2. Do you deliver instruction to small groups or 1:1? If you serve students in a group setting, what is your least number of students served in a group setting? What is your greatest number of students served in a group setting?
Minutes per Week Administered per Session	3. How much time do you spend delivering Wilson Reading a week?
Lesson Plan Delivery	4. According to the Wilson Reading System, group lessons for no more than 3-6 students can be done three times per week for 90 minutes or five times per week for 45. Describe what happens during the group lessons.  5. Each lesson is comprised of three blocks. How often do you deliver a lesson that contains the three blocks? Describe what happens in each of the three blocks.

**Wilson Assessment of Decoding and Encoding.** The Wilson Assessment of Decoding and Encoding (WADE) is a criterion-referenced assessment that was developed by the founders of the Wilson Reading System program, Barbara and Edward Wilson. The WADE is used as a pre- and post-test. The post-test is given at the end of instruction to evaluate mastery of the curriculum and assess the student’s ability to independently apply decoding and encoding skills (Wilson Language Training Corporation, 2016a). The WADE is broken into subtests and each subtest has a benchmark percentage of correct

responses that he/she must meet in order to advance to the next level. Table 3 lists the required percentages of correct responses according to each subtest of the WADE.

Table 3

*Required Percentages of Correct Responses to Show Mastery In Order to Advance*

Wilson Reading System Subtest	Required Percentage of Correct Responses
Sounds	85
Reading real words	85
Reading nonsense words	80
Spelling test, words	75
Spelling test, sentences	80
Sight word test, reading	85
Sight word test, spelling	80

When determining mastery scores on the WADE post-test, the Mastery Section on the WADE Recording Form must be used. To calculate the Mastery Score, the sub step numbers beside the test items found on the Reading and Sight Word Recording Form and Spelling Test Chart must be used to determine the number of WRS Items (Wilson Language Training Corporation, 2016b). The number of the last test item corresponding to the latest sub step taught is used for this section. Then the Total Correct must be determined by referring to the last item corresponding to the latest sub step taught. The formula used for determining the Mastery Score is:  $\text{Total Correct/WRS Items} = \frac{\text{Total Correct}}{\text{WRS Items}}$ . \_\_\_\_\_ x100 = \_\_\_\_\_ % mastered (Wilson Language Training Corporation, 2016b).

To show mastery on the WADE post-test, students must score at least 80% or higher. The MASD’s guidelines state that in order for students to successfully exit the program, students must be in Book 9 with a score of 80% or better.

This evaluation used WADE post-test assessment data for students that were enrolled in the MASD’s Wilson Reading System program from the 2013-2014 school

year through the 2015-2016 school year. The Wilson Reading teachers and the district's director of special education services provided these data. There is currently no evidence of validity and reliability data available for the WADE assessment.

**Virginia Standards of Learning Reading assessment.** The Virginia Reading Standards of Learning assessment will be used for this evaluation. Standards of Learning tests measure the success of students in meeting the state Board of Education's expectations of learning and achievement. Reading, writing, mathematics, science, and history/social sciences are assessed and the data are used to determine student achievement, as well as school accreditation (VDOE, 2016). These assessments are criterion-referenced tests that are also used as a means to comply with federal laws and to meet federal standards of reliability, validity, and technical quality. The VSOL reading assessment is comprised of both passage-based items, which contain a variety topics and genres, and stand-alone items. The passages are selected according to interest and appropriate grade level content for that grade level (VDOE, 2015). The reading test is developed to elicit student responses that accurately reflect proficiency in relation to the reading content standards (VDOE, 2015). The reporting categories for the reading VSOL are: use word analysis strategies and word reference materials, demonstrate comprehension of fictional texts, and demonstrate comprehension of nonfiction texts (VDOE, 2015).

The federal Elementary and Secondary Education Act (ESEA), also known as the 2001 *No Child Left Behind Act*, requires states test all students annually in reading and mathematics in third through eighth grade and at least once in both subjects in high school (VDOE, 2016). To measure student success, a cut score is set through the



unidimensional IRT Rasch Partial Credit Model calibration, scaling, and equating. The WINSTEPS software program is used to calculate item difficulty estimates and is also used to calculate student proficiency estimates. A raw score-to-scale conversion equates the overall score that a student receives (VDOE, 2015). Passing scores range from 400 to 600 with a pass advanced score beginning at the scaled score mark of 500.

Reliability and validity of the VSOL tests are determined through a Standards of Learning (SOL) Technical Advisory Committee using coefficient alpha reliability coefficients (VDOE, 2015). This VSOL Technical Advisory Committee is composed of a chairperson and four additional members who have expertise in psychometric characteristics and content characteristics of large-scale assessments. These members are appointed by the president of the Virginia Board of Education and they are required to have no conflict of interests related to the Virginia Standards of Learning testing program (VDOE, 2015). The VSOL Technical Advisory Committee reports all findings to the Board of Education.

The MASD's Reading Virginia Standards of Learning test student scaled scores for the eight elementary schools and three middle schools where the program was implemented and had students who successfully completed the Wilson Reading System as measured by the WADE from 2013-2014, 2014-2015, and 2015-2016 will be used as data for this study.

The VSOL for the grade level reading assessment has broad reporting categories that measure VSOL curriculum mastery. The WADE post-test assessment assesses specific skills that fall under the broad categories of the VSOL assessment reporting categories. The WADE post-assessment measures how well a student develops accurate

and speedy word recognition; developing independent reading of connected text with ease, expression, and meaning; and developing vocabulary, background knowledge, listening and reading comprehension (Wilson Language Training Corporation, 2016b). The VSOL reporting categories on the reading assessment are word analysis and word reference materials; comprehension of fictional texts; and comprehension of nonfiction texts (VDOE, 2015). Looking at Figure 2, the VSOL assessment reporting categories are listed across the top of the figure. Along the left side the WADE post-assessment skills are listed. Currently, there are no documented alignment tools that have been produced by the Virginia Department of Education or the Wilson Language Training Corporation to signify how the two assessments are aligned. Therefore, because the VSOL reporting categories are more broad, with regards to reading, and the WADE measures very specific skills within those broad categories, establishing the alignment between the VSOL and the WADE was done by the evaluator using the VSOL essential skills and cross-examining the WADE skills to determine alignment. If the VSOL and WADE assessment measured the same specific skill, the evaluator determined that there was alignment for that measurement.

VSOL Reading Assessment Reporting Categories			
	Word Analysis Strategies and Word Reference Materials	Comprehension of Fictional Texts	Comprehension of Nonfiction Texts
WADE Post-Assessment Skills	(RW, NW, SW, SS)	(RW, NW, SW, RR)	(RW, NW, SW, RR)
Reading and Spelling of Real Words (RW)	<ul style="list-style-type: none"> <li>Use context to clarify meanings of unfamiliar words</li> <li>Use knowledge of roots, affixes, synonyms, antonyms, and homophones.</li> </ul>	<ul style="list-style-type: none"> <li>Use vocabulary from other content areas.</li> <li>Describe how the choice of language, setting, characters, and information contributes to the author's purpose.</li> <li>Identify the main idea</li> <li>Summarize supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>Use vocabulary from other content areas.</li> <li>Use text structures, such as type, headings, and graphics, to predict and categorize information in both print and digital texts.</li> </ul>
Reading and Spelling Nonsense Words (NW)	<ul style="list-style-type: none"> <li>Use context and sentence structure to determine meanings and differentiate among multiple meanings of words</li> <li>Identify word origins and derivations.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the problem and solution.</li> <li>Identify sensory words.</li> <li>Draw conclusions/ make inferences about text.</li> <li>Make, confirm, or revise predictions.</li> <li>Identify cause and effect relationships.</li> </ul>	<ul style="list-style-type: none"> <li>Explain the author's purpose.</li> <li>Identify the main idea.</li> <li>Summarize supporting details.</li> </ul>
Reading and Spelling Sight Words (SW)	<ul style="list-style-type: none"> <li>Identify connotations.</li> </ul>	<ul style="list-style-type: none"> <li>Explain how character and plot development are used in a selection to support a central conflict or story line.</li> <li>Describe the elements of narrative structure including setting, character development, plot structure, theme, and conflict.</li> </ul>	<ul style="list-style-type: none"> <li>Draw conclusions and make simple inferences using textual information as support.</li> <li>Use text structures to aid comprehension.</li> </ul>
Spelling Sentences (SS)		<ul style="list-style-type: none"> <li>Compare and contrast various forms and genres of fictional text.</li> <li>Identify conventional elements and characteristics of a variety of genres.</li> </ul>	<ul style="list-style-type: none"> <li>Organize and synthesize information for use in written formats.</li> </ul>
Reading Comprehension (RR)		<ul style="list-style-type: none"> <li>Describe the impact of word choice, imagery, and literary devices including figurative language.</li> </ul>	

Figure 2. A crosswalk for the Wilson Assessment of Decoding and Encoding (WADE) post-assessment specific skills and the Virginia Standards of Learning (VSOL) reading assessment (Wilson Language Training Corporation, 2016b; VDOE, 2015).

## **Data Collection**

Data collection for this program evaluation was in the form of Wilson Reading System teacher interviews. The evaluator contacted Phase 1 and Phase 2 teachers by email to schedule a one-hour interview session for each teacher. The interviews were scheduled at the convenience of each teacher. Additionally, the evaluator requested from the schedule of implementation for each student session from each teacher in Phase 1 and Phase 2. The schedules showed the frequency and duration of each student session during the time of implementation. Along with the schedules, the teachers included the lessons that were taught in each session with each group.

Additional data used for this study were retrieved from the Director of Accountability for the MASD. The evaluator requested the 2013 through 2016 Spring Non-Writing Reading VSOL assessment scaled scores for the eight elementary and three middle schools whose students with disabilities are also served by the Wilson Reading System. The Director of Accountability provided the Spring Non-Writing VSOL assessment scaled scores electronically in a CSV file. The evaluator also requested the WADE post-test scores for those students who were served by the Wilson Reading System during the same timeframe. These scores were provided via spreadsheet in Microsoft Office Word format. The evaluator made a list of each student who successfully exited the Wilson Reading System according to the WADE post-test and include the grade level at which they exited. Then the evaluator used the VSOL CSV file for that grade level to identify the student's scaled score of the reading VSOL assessment of the year that the student successful exited the program. For example, if a student successfully exited the Wilson Reading System in 8th grade, the evaluator examined the

8th grade reading VSOL assessment CSV file and located the scaled score. A student was considered successfully mastering grade level content if the scaled score for that school year and grade level that he or she successfully exited the Wilson Reading System was 400 or above.

### **Data Analysis**

This evaluator collected data and analyzed these data using both quantitative and qualitative research methods. The data that emerged from this study was descriptive, as it came from the participant's words, and qualitative analysis was in the form of interpreting the Wilson Reading System teacher interviews (Creswell, 2014). Through qualitative interpretation, basic codes and themes form a more complex meaning and theme connections (Creswell, 2014). The qualitative interpretation involved transcribing interview data, developing codes, comparing what teachers said they did to the Wilson reading model suggestion, and reorganizing the themes into larger units to make the most sense of the data (Creswell, 2014). The evaluator recorded and transcribed each interview into a Word document to prepare for data interpretation. Additionally, recording each interview ensured that the approach was consistent, which increased the reliability of the data (Creswell, 2014). To maintain confidentiality, the evaluator changed each teacher's name in this study. Each interview transcription was read multiple times for understanding and to segment the interviews (Creswell, 2014). Writing in notes in the margins of the interviews begins the coding process and allowed themes to emerge and the evaluator to develop the theme connections (Creswell, 2014).

The evaluator used multiple data sources, such as the Wilson Reading System recommended implementation information, Wilson Reading System MASD's teacher

schedules of implementation, WADE assessment data, and VSOL assessment data for comparison to enhance the credibility of qualitative data (Mertens & Wilson, 2012). After reviewing the qualitative data, the evaluator used a frequency count to examine the assessment to see if there were connections to successful completion of Wilson Reading System as measured by the WADE and grade level mastery as measured by the grade level VSOL reading assessment. Additionally, the evaluator calculated a percentage based on the frequency count of students who successfully exited the Wilson Reading program and how many of those students scored proficient on the VSOL reading assessment. The combination of the qualitative and quantitative data that the evaluator collected and interpreted were used to provide insight into the implementation methods of the Wilson Reading System for school and district leaders. Table 4 provides a summary of the data sources and method of data analysis used for the evaluation questions.

Table 4

*Data Analysis and Data Sources for the Wilson Reading System Program Evaluation*

Evaluation Questions	Data Sources	Data Analysis
1. How does the reading program that was implemented over the last three years align to the implementation model suggested by the Wilson Reading System?	<ul style="list-style-type: none"> <li>• Teacher Interviews</li> <li>• Frequency Count of Differing Treatments</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative analysis and interpretation of schedule and lesson documents</li> <li>• Triangulate data with schedules, frequency &amp; duration</li> </ul>
2. How does the program as it is currently implemented align with the implementation model suggested by the Wilson Reading System?	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Frequency Count of Differing Treatments</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative analysis and interpretation of schedule and lesson documents</li> <li>• Triangulate data with schedules, frequency &amp; duration</li> </ul>
3. Of the students who successfully exited the Wilson Reading System according to the WADE during the first three years of implementation, what percentage scored proficient on the Virginia Standards of Learning reading assessment?	<ul style="list-style-type: none"> <li>• Wilson Assessment of Encoding and Decoding (WADE)</li> <li>• Virginia Standards of Learning Reading Assessment (VSOL)</li> </ul>	<ul style="list-style-type: none"> <li>• Percentage calculation based on frequency</li> <li>• Triangulate data from WADE, VSOL reading assessment</li> </ul>

**Ethical Considerations**

Several ethical considerations were addressed in this study. These considerations include adherence to the district’s approval to conduct research request, the College of William and Mary’s Institutional Review Board, and adherence to program evaluation standards. Additionally, ethical practices and research were at the foundation of this study. Collaborating with stakeholders in the organization, ensuring confidentiality,

building trust, and maintaining mutual communication and respect ensuring general ethical considerations were considered and adhered to throughout the evaluation.

Furthermore, an evaluator sought approval to conduct the research within the context, as well as, followed the approval process of the attending educational institution. As the evaluator, I have followed the district's research request policy and I was granted approval from the Office of School Improvement to conduct the program evaluation. After a successful proposal defense, I completed an application to The College of William and Mary's Educational Institutional Review Board. I ensured that all ethical standards were followed and informed consent of all participants was obtained before conducting any interviews for the study.

**Institutional Review Board.** After the completion of a successful dissertation proposal defense, the evaluator submitted a completed application to the College of William and Mary Educational Institutional Review Board (IRB). Once the appropriate permissions were secured to conduct the study, the evaluator ensured that all ethical standards were followed to protect the teacher participants from any potential harm. Informed consent was required and obtained from the teacher participants before conducting any interviews for the study. Student data were not collected except in the form of extant data from the district's WADE post-test scores and VSOL reading assessment scores.

**Adherence to program evaluation standards.** In addition to adhering to the IRB guidelines, the study also adhered to the *Standards for Program Evaluation* (Yarbrough, Shulha, Hopson, & Caruthers, 2011).



The Joint Committee on Standards for Educational Evaluation (2011) developed The Program Evaluation Standards (Standards) to act as a framework for determining the quality of an evaluation to use as a guide for evaluating educational programs in a variety of settings (Yarbrough et al., 2011). The Standards are organized into five categories: utility, feasibility, propriety, accuracy, and meta-evaluation (Yarbrough et al., 2011). The utility standards focus on the usefulness and appropriateness of the evaluation. To adhere to the utility standards, the evaluator communicated regularly with district program leaders about the usefulness of the study for district leaders. The evaluator shared the logic model with the district leaders to ensure that the program being evaluated was adequately and appropriately described.

The feasibility standards focus on the extent to which the evaluation can be done in a particular setting successfully. To adhere to the feasibility standards, the evaluator attempted to maintain clear and appropriate data collection measures as well as a data collection schedule of interviews that reflected as little disruption to the work of the teachers in the program as possible.

The propriety standards address the moral, ethical, and legal aspects and ramifications of the study to ensure participants are treated safely and fairly. To maintain the propriety of the evaluation, the evaluator made every effort to design an evaluation that maintained the dignity of the teachers and others participating in the study. Additionally, completed descriptions of the findings, limitation, and conclusions were communicated to the district leaders and other interested stakeholders.

The accuracy standards refer to how trustworthy and dependable was the evaluation. The meta-evaluation standards refer the merit of the study by critically

examining the program evaluation itself (Mertens & Wilson, 2012). Every effort was made to adhere to the program evaluation standards for accuracy, including the selection of valid and reliable interview questions, complete and accurate descriptions of the program and the participants, and accuracy and consistency in reporting the results.

### **Delimitations and Limitations**

Delimitations are boundaries that control the scope of the study and are set by the evaluator (Creswell, 2014). Delimitations of this study included focusing on only the schools that implement the Wilson Reading System and focusing only on the teachers who were providing the instruction through this program. In an attempt to evaluate the implementation of the program, only the teacher stakeholder group was focused on rather than including school administrators or district leaders. Another delimitation is that the program theory of the Wilson Reading System framework was used to frame the study.

There were limitations that exist in this study. The program evaluation format of the study created its own set of unique limitations. There was great potential for subjectivity in implementation of the Wilson Reading System in the MASD. The factors that determined the success of the Wilson Reading System in the district was not generalizable from one school setting to another (Fitzpatrick, Sanders, & Worthen, 2011). The findings that did emerge from this study were generalized to teachers with similar backgrounds and similar contexts as the district in this study; the findings may lack the generalizability to other school contexts.

Another potential limitation of the study was the evaluator's relationship to the school district. The evaluator is an employee of the MASD and therefore there are biases that can be assumed as a result. The evaluator also serves in an evaluative role in the

district and although the evaluator directly supervises only one Phase 2 teacher, some of the teachers may have felt uneasy about providing honest responses to the interview questions.

The evaluator's role in the district allowed for access to information regarding the program, personal bias towards the program was considered and accounted for in this study. Keeping an audit trail of all data collected, including copies of transcriptions and audio recording of interviews was a way to reduce evaluator bias during this program evaluation. Additionally, getting the support of district leaders for conducting the program evaluation prior to conducting the study was essential. This allowed for district leaders to receive positive and/or negative feedback and recommendations for program improvement from the evaluator (Mertens & Wilson, 2012).

### **Summary**

This program evaluation provided an in-depth study of the MASD's implementation of the Wilson Reading System in Phase 1 and Phase 2 of the implementation cycle. Using mixed methods through document reviews, teacher interviews, and extant student data informed the evaluator about implementation of the program in the district, the successes and challenges that may have come because of implementation. Findings from this study were used to inform school and district leaders in this context as they continue to implement the Wilson Reading System and in other contexts considering implementing the program.

## CHAPTER 4

### Results

The study assessed the fidelity of implementation of the Wilson Reading System in the MASD according to the Wilson Reading System recommendation of implementation. A mixed methods approach through document reviews, teacher interviews, and reviewing extant student data were used to inform the evaluator about implementation of the program in the district, including the successes and challenges with implementation. Face-to-face teacher interviews were conducted with Phase 1 and Phase 2 Wilson Reading System teachers in MASD using the interview protocol (Appendix B). Data were analyzed according to the Wilson Reading System recommendation of implementation according to the following categories: staff training, number of students served, minutes per week administered per session, and lesson plan delivery.

#### **Program Evaluation Question One**

Teacher interview data and a document review were used to answer program evaluation question one: How does the reading program that was implemented over the last three years align to the implementation model suggested by the Wilson Reading System?

**Staff training.** According to the Wilson Language Training Corporation (2016a), in order to successfully complete the Wilson Reading System Level I certification program, individuals must:

- Complete the Wilson Reading System Intensive Instruction: Online Course (Steps 1-6).
- Complete a practicum with a 1:1 student for a minimum of 60 lessons. A lesson plan must be written for each lesson and the student must meet the selection criteria.
- Practicum instruction must be observed at least five times by Wilson trainer that lasts approximately one hour.
- Pretesting reports must be submitted on the practicum student, including educational history and current test results.
- Teacher and student notebook must be developed to include students' written work in accordance with Wilson Language Training program standards.
- Demonstrate mastery of the Wilson Reading System Lesson Plan procedures through documentation by Wilson trainer.
- Demonstrate an understanding Steps 1-6 of language concepts by teaching with multisensory procedures.
- Demonstrate an understanding of student success and mastery of decoding/encoding skills.
- Pre- and post-testing with two norm-referenced tests, post-test data, and required Practicum Student Report must be completed and submitted.

Over the last three years, during Phase 1, three teachers delivered Wilson Reading System instruction at eight of the nine elementary schools and three middle schools in the division. Two of the three teachers were trained one-on-one by a Wilson Reading System

trainer in the district. One of the three teachers was trained by the founder of the Wilson Reading System in a small group outside of the division. Each teacher trained at a different time than the other and all three teachers participated in a practicum where their lessons were reviewed and they were observed by a trainer.

The three Phase 1 teachers were not trained at the same time, they all completed Level I certification of the Wilson Reading System the training. During the interviews, the teachers were not asked specific questions about the elements of the training; however, when asked about the training the following theme emerged.

***Adequacy of training.*** Adequate training is a necessary component to being able to implement a program to fidelity (Mellard, 2009). Phase 1 teachers described their training as “intense.” According to one teacher, the practicum “really gives you that sense of how much it takes, what you need to do, what you need to know, [and] what you’re lacking in yourself to be successful.” A second teacher stated that her training was done “before everything was digital, but the trainer came, viewed lessons and lesson plans, and was there to answer questions and offer suggestions.” This Phase 1 teacher felt the “basic training does get you prepared to branch out and do anything with the Wilson Reading Program.” Moreover, a third teacher stated “this training did prepare me for implementing the Wilson Reading System to the utmost, because the training was so intense.” Through the three interviews it was evident that all three teachers felt that the practicum was a valuable part of their training. They each described the practicum to be where “you get the true feeling of Wilson is.” Additionally, it was described that having access to the trainer through the practicum allowed for constant feedback and ongoing support.

**How students are served.** According to the Wilson Language Training Corporation (2016a), students can be served one-to-one or in a group of no more than six students at a time. The teachers in Phase 1 stated that they used small group instruction as well as one-on-one instruction over the three year time period. One teacher stated that she preferred to do one-to-one because “you can really hone in on their deficits.” The teachers indicated during their group instruction that a group of two students was their smallest group and their largest group was no more than five students. Teachers indicated that their groups can be same grade level students grouped together or multiple grade levels grouped together. The groupings were based on student need and schedules.

**Minutes per week.** The Wilson Language Training Corporation (2016a) states that Wilson Reading System instruction should be delivered 60 – 90 minutes, two to five times a week for students who are served one-to-one and 45 – 90 minutes daily in a small group setting. For the Phase 1 implementation, data documents were reviewed to determine how students were served during that time. The three teachers were unable to recall specifically how many minutes per week they served students during the three year period and requested the evaluator to review the schedule documents provided by the district. The evaluator collected implementation frequency and duration counts from each of the Phase 1 teachers and put the information in a Word document. Over the three year time period, there were six different frequency and duration times listed for students in 2nd – 8th grades. Students were either served four times a week for 30 minutes, every other day for 30 minutes, three times a week for 30 minutes, every day for 30 minutes, every two weeks for 225 minutes, or every two weeks for 300. Table 5 illustrates the

frequency and duration counts that were collected for the Phase 1 implementation in Grades 2-5.

Table 5

*Number of Students Served According to the Frequency and Duration Counts for MASD Phase 1 Implementation in Grades 2-5*

<b>Grade</b>	<b>School Year</b>	<b>30 min. 4x per week</b>	<b>30 min. Every Other Day</b>	<b>30 min. 3x per week</b>	<b>30 min. Every day</b>	<b>225 min. every 2 weeks</b>
2nd	13-14	5	14	0	0	0
	14-15	0	11	1	0	0
	15-16	0	8	4	0	11
3rd	13-14	0	0	0	0	0
	14-15	8	14	0	0	0
	15-16	2	5	14	11	0
4th	13-14	0	0	0	0	0
	14-15	3	5	0	0	0
	15-16	3	3	5	2	0
5th	13-14	0	0	0	0	0
	14-15	0	0	0	0	0
	15-16	0	6	0	0	0

*Note.* Based on the Wilson Reading System Implementation Model, which recommends 45 minutes daily; it is acceptable to meet for 30 minutes daily, provided no more than 6 students are in the group.

As shown in Table 6, according to the three years of implementation during Phase 1, students received varying levels of duration. For example, in 3rd grade during the 2014-15 school year, 14 students received 30 minutes of instruction every other day per week and in the 2015-16 school year, 14 students received 30 minutes of instruction three times per week. Additionally, the Wilson Reading System is used for students in sixth through eighth grade in the MASD. Table 6 illustrates the number of students served according to the frequency and duration counts for Phase 1 in Grades 6-8.



Table 6

*Number of Students Served According to the Frequency and Duration Counts for*

*MASD Phase 1 Implementation in Grades 6-8*

<b>Grade</b>	<b>School Year</b>	<b>225 min. every 2 weeks</b>	<b>300 min. every 2 weeks</b>
6th	13-14	2	0
	14-15	2	0
	15-16	12	0
7th	13-14	0	2
	14-15	0	2
	15-16	0	2
8th	13-14	0	4
	14-15	0	1
	15-16	0	2

*Note.* Based on the Wilson Reading System Implementation Model, which recommends 45 minutes daily; it is acceptable to meet for 225 minutes bi-weekly for students in Grades 6-8.

Tables 6 and 7 show that students received different levels of duration during Phase 1 of implementation. The frequency and duration counts do not indicate if students were served individually or in small group. During the interviews, reasons for such variation centered on student needs and schedules.

***Student needs.*** Each teacher indicated that student needs drive the amount of minutes that each student received. One teacher stated that minutes served depended upon “the degree of the child’s disability and where they are, their level of capacity to understand, grasp, and retain.” A second teacher indicated that by knowing what her students need, she is able to use personal and professional choice when making decisions about the amount of time that a student spends doing Wilson Reading. A third teacher stated “I am able to use what I know about my students to drive what I do with the Wilson program to really hone in on exactly what he or she needs.”

**Scheduling.** It was evident that with scheduling the overall master schedule served as a barrier in the number of minutes students received the Wilson Reading System instruction. One teacher stated the “overall scheduling facilitated the implementation time of the program.” A second teacher explained that “it’s the overall schedule of the day impacts” the Wilson Reading System delivery model within her school. Another teacher explained that during this phase of implementation, there were three teachers who were responsible for serving students at the eight elementary schools and three middle schools, which also added to the complexity of scheduling. The teachers had to factor in travel time to the different locations as well as working around the varying schedules and student needs at each building.

**Lesson plan delivery.** According to the Wilson Language Training Corporation (2016a), the lesson plan is composed of ten parts that are organized into three blocks that take approximately 30 minutes each, with constant interaction between teacher and student. The students are grouped according to pacing. A complete lesson consists of completing all three blocks, which can take approximately 90 minutes. The three teachers of Phase 1 consistently complete Block 1 and Block 2 of the three block lesson plan system prescribed by the Wilson Reading System. One of the three teachers has a system for completing Blocks 1, 2, and 3 within a week timeframe, whereas the other two teachers do not complete Block 3 consistently. Through the interviews it was evident that scheduling and student needs contribute to why all three of the Phase 1 teachers didn’t do Block 3 consistently.

*Scheduling and student needs.* One teacher stated,

I can do two of the three lessons in the amount of time I have. Block 3 is really comprehension and that instruction is delivered by someone else. These are truly, truly, truly Wilson students who have high comprehension and their deficits and disability is with not being able to decode.

Another teacher stated she devised a system that allowed her to complete all three blocks in a week:

Forty-five minutes five times is tough. So I do the Block 1/Block 2 that they've given us, because you can do them in 30 minutes. I do the first block Monday, the second block Tuesday, and the third block Wednesday. And then I review on Thursdays and Fridays or I start the next lesson.

Table 7 illustrates the number of teachers that complete each of the three different blocks of the Wilson Reading System lesson plan. One of the teachers stated that Block 3 is mostly comprehension and due to the short amount of time that instruction is scheduled, she concentrates on blocks 1 and 2 and has someone else work on the comprehension piece with the students.

Table 7

*Number Of Teachers Who Completed Each Of The Three Blocks Of The Wilson Reading System Lesson Plan*

Block	Lesson Plan Delivery	
	Consistently	Not Consistently
1	3	0
2	3	0
3	1	2

*Note.* In the Wilson Reading System Implementation Model, each lesson plan is composed of 10 parts, which are broken into three blocks. Block 1 contains Parts 1-5 and focuses on word study, decoding, and vocabulary. Block 2 is comprised of Parts 6-8 and focuses on spelling and writing. Block 3 is Parts 9-10 and engages students in reading controlled text passages, listening comprehension, and applied skills.

**Summary for program evaluation question one.** Based on the data gathered from the Phase 1 teacher interviews and the data document reviews, it was evident that, although not directly asked about each of the components of the Wilson Reading System training, the teachers did feel that they were adequately trained to implement the Wilson Reading System to fidelity. Through teacher interviews, it became evident that there were distinct elements to support adequacy of training. They each indicated that the training with a certified trainer was intense and that it prepared them to be Level I Wilson Reading System Certified instructors. The Phase 1 teachers also explained that the number of minutes served and lesson plan delivery are driven by individual student needs and scheduling. Although it is the intent to deliver the instruction as recommended by the Wilson Reading System implementation model, not all students can go at the pace of the recommendations of the model and professional judgment is used to support students in this program. In addition, the teachers explained that the master schedule of each school that they worked in, as well as, the particular schedule for the student affected the amount of time that a lesson could be delivered. Overall, each of the three Phase 1 teachers indicated their belief in the program when using it with the “right” type of student and their desire to continue teaching using this program. One teacher stated “Wilson is for children that have a severe language-learning disability, including dyslexia. They have a good, solid IQ.” She expressed that not everyone “fits” into this program, but for those that do, she felt that it really works.

## **Program Evaluation Question 2**

Teacher interview data and document reviews were used to answer program evaluation question 2:

How does the program as it is currently implemented align with the implementation model suggested by the Wilson Reading System?

**Staff training.** According to the Wilson Language Training Corporation (2016a), in order to successfully complete the Wilson Reading System Level I certification program, individuals must:

- Complete the Wilson Reading System Intensive Instruction: Online Course (Steps 1-6).
- Complete a practicum with a 1:1 student for a minimum of 60 lessons. A lesson plan must be written for each lesson and the student must meet the selection criteria.
- Practicum instruction must be observed at least five times by a Wilson trainer that lasts approximately one hour.
- Pretesting reports must be submitted on the practicum student, including educational history and current test results.
- Teacher and student notebook must be developed to include students' written work in accordance with Wilson Language Training program standards.
- Demonstrate mastery of the Wilson Reading System Lesson Plan procedures through documentation by Wilson trainer.
- Demonstrate an understanding Steps 1-6 of language concepts by teaching with multisensory procedures.

- Demonstrate an understanding of student success and mastery of decoding/encoding skills.
- Pre- and post-testing with two norm-referenced tests, post-test data, and required Practicum Student Report must be completed and submitted.

Phase 2 implementation consisted of eight teachers trained in a yearlong program, along with one teacher who was previously trained in the division, and the three teachers from Phase 1 whose training is described in program evaluation question one.

*Adequacy of training.* There are a total of 12 Wilson Reading System teachers, three are in Phase 1 and nine are in Phase 2. Although all 12 teachers were not trained at the same time, all of the teachers indicated that they felt that they were adequately trained to implement the Wilson Reading System to fidelity. The nine Phase 2 teachers were not asked directly about each element of the training, yet the teachers did indicate that they participated in an online course through their training and they did a practicum where they were observed by a trainer. Of the 12 teachers who implemented Wilson Reading System instruction in Phase 2, eight of the teachers participated in the same training together provided by the district. The eight teachers described the training as an intense week long training during the summer. Of those eight teachers two teachers indicated that the training provided the opportunity to learn the philosophy of Wilson Reading and stated that they were able to “hear the theory of everything, then put it into practice.” Additionally, the teachers specifically referenced the online component that had to be completed as a part of the certification process, which one teacher referred to as a 90 credit graduate level course.

Throughout the year, the trainer observed at different benchmarks of the course and provided feedback. One teacher recalled that she was observed in person and then sent a video recording of the last session to the trainer to be critiqued and she received feedback. The two-part system of the online and the trainer observations were referred to as “beneficial” and “very thorough.”

**Feedback.** The Phase 2 teachers indicated that having the ability to ask questions of the trainer and receiving immediate feedback were effective components of the training process. One teacher stated that the trainer was “more of a coach, than anything else.” Two of the 12 teachers referred to the practicum as being a similar experience as their student teaching experience. Another teacher stated that each teacher in the cohort had to pick one case study student, then teach 45-minute lessons daily. One teacher felt it was important to be observed because “you think you’ve understood something, then they come and explain that it isn’t quite right, and they help you tweak it.” Specifically, the trainer observations and lesson plan reviews provided support and feedback that each teacher explained to be “constructive,” “positive,” “helpful,” and “valuable.”

**How students are served.** As mentioned above in program evaluation question one, according to the Wilson Language Training Corporation (2016a), students can be served one-to-one or in a group of no more than six students at a time. Phase 2 teachers indicated that six of the 12 teachers served students in a small group setting. Five of the 12 teachers served students in a small group setting and a one-to-one setting. All 12 teachers had indicated that they served five or less in a small group setting at any given time. Through the interviews, teachers indicated that student need and teacher preference influenced how students were served.

***Student need and teacher preference.*** Interview results revealed themes of student need and how teachers felt most comfortable serving students when asked how students are served. One of the 12 teachers served students in a one-to-one setting only. The teacher indicated that she only has one student in the school who is receiving Wilson, so she is only doing one-to-one this year. When asked the question about serving students one-to-one or using groups, one teacher stated, “Well it depends. Ultimately, I would like to do one-to-one because you can really hone in on their deficits, but being able to put students together who are on the same level does help when making groups.” A teacher explained that “throughout the year it’s been a range of four to six group and my group size is typically four. That seems to be the most comfortable setting for me.”

**Minutes per week.** As previously stated, the Wilson Language Training Corporation (2016a) states that Wilson Reading System instruction should be delivered 60 – 90 minutes, two to five times a week for students who are served one-to-one and 45 – 90 minutes daily in a small group setting. Through the face-to-face interviews, it was indicated that Wilson Reading System instruction is delivered anywhere from 575 minutes per week to approximately 1200 minutes per week. The exposure to treatment varies according to the minutes per session students are provided instruction during a school day each week. Table 8 illustrates the frequency and duration counts collected for students who were served during Phase 2 implementation in Grades 2-5.



Table 8

*Number of Students Served According to the Frequency and Duration Counts for*

*MASD Phase 2 Implementation in Grades 2-5 (2016-2017)*

<b>Grade</b>	<b>25 min. 5x per week</b>	<b>30 min. 5x per week</b>	<b>40 min. 5x per week</b>	<b>30-45 min. 4x per week</b>	<b>45 min. 5x per week</b>
<b>2nd</b>	0	15	0	0	0
<b>3rd</b>	1	29	2	0	0
<b>4th</b>	0	27	2	2	0
<b>5th</b>	1	15	0	2	2

*Note.* Based on the Wilson Reading System Implementation Model, which recommends 45 minutes daily; it is acceptable to meet for 30 minutes daily, provided no more than 6 students are in the group.

Additionally, Table 9 illustrates the frequency and duration counts collected for students who were served during Phase 2 implementation in Grades 6-8.

Table 9

*Number of Students Served According to the Frequency and Duration Counts for*

*MASD Phase 2 Implementation in Grades 6-8 (2016-2017)*

<b>Grade</b>	<b>45 min. Every Other Day</b>	<b>50 min. Every Other Day</b>	<b>60 min. Every Other Day</b>
<b>6th</b>	2	0	0
<b>7th</b>	0	1	2
<b>8th</b>	0	0	2

*Note.* Based on the Wilson Reading System Implementation Model, which recommends 45 minutes daily; it is acceptable to meet for 225 minutes bi-weekly for students in Grades 6-8.

Six of the 12 teachers reported that they see their students in small group for 30 minutes per session each day. Teachers indicated that these variations of time listed above are due to ensuring student's needs are met and working within the parameters of scheduling.

***Student needs and scheduling.*** Teachers indicated that student levels impact how they are served. A teacher explained that she was serving two students in a group where the students were on different levels “and that was extremely hard. I felt one of the children was not making progress, and had the data to support it, so it was good to separate them.” Another teacher explained, when asked this question, “student IEPs and availability. It has to be worked in based on the other classes they have.”

Another teacher indicated that the students she serves through the Wilson Reading System, also receives push-in or pull-out services from their special education case manager, in addition to getting the pull-out services from her for Wilson instruction. She stated, “to be respectful of everybody’s time, the thirty minutes has really been what we’ve been able to implement a day here.”

One of the 12 teachers stated she works with two 45-minute groups and one 25-minute group each day. Two teachers who also serve groups of students for 30 minutes each day also serve one group for 40 minutes each day. One teacher explained that because she serves groups, and the group lesson plan is split into two days, she splits into three days to ensure her students receive all of the instruction in the thirty minute timeframe.

The two middle school teachers serve students according to “A” and “B” day schedules. For example, one teacher stated she serves 6th graders for 45 minutes on “B” days and serves 7th and 8th graders for an hour on “A” days. She indicated that this schedule is a lot easier to do in middle school.

**Lesson plan delivery.** According to the Wilson Language Training Corporation (2016a) the lesson plan consists of three blocks and it takes 30 minutes to complete each

block. A complete lesson requires 90 minutes. The interview results indicate that 12 of the 12 Wilson Reading System teachers consistently deliver Block 1 of the three block Wilson Reading System lesson plan. Ten of the 12 teachers report that they are able to deliver Block 1 and Block 2 each week consistently than Block 3. One teacher indicated that she delivers Block 1 and 3 when she is doing an introductory lesson and Block 1 then Blocks 2 and 3 together when she is not teaching an introductory lesson. Table 10 illustrates the number of teachers that complete each of the three different blocks of the Wilson Reading System lesson plan.

Table 10

*Number Of Teachers That Complete Each Of The Three Blocks Of The Wilson Reading System Lesson Plan In Phase 2 Of Implementation*

Block	Lesson Plan Delivery	
	Consistently	Not Consistently
1	12	0
2	12	0
3	2	10

*Note.* In the Wilson Reading System Implementation Model, each lesson plan is composed of 10 parts, which are broken into three blocks. Block 1 contains Parts 1-5 and focuses on word study, decoding, and vocabulary. Block 2 is comprised of Parts 6-8 and focuses on spelling and writing. Block 3 is Parts 9-10 and engages students in reading controlled text passages, listening comprehension, and applied skills.

Although Block 3 appears to be done not as consistently as Blocks 1 and Block 2, it was evident through the interviews of the 12 teachers that student need, feasibility, and scheduling drive lesson plan delivery.

***Student needs.*** Each of the 12 teachers discussed how student needs impact the delivery of the three block lesson plan model. For example, one teacher indicated for those students who need definite encoding and decoding work, Block 1 and Block 2 are the major focus. Another teacher said, “in talking with their case managers, we

strategically chose to focus on decoding and encoding and not the third block because the students' decoding was low.”

***Feasibility and scheduling.*** Additionally, two teachers indicated that due to scheduling constraints, the comprehension piece, which they referred to as Block 3, is delivered by another teacher in a different setting. Another teacher stated, “Ideally, I’d love to add more of it in, it’s just a time pressure, so we focus on the specific need.” Scheduling sessions that work within the confines of master schedules, individual teacher’s schedules, collaborating teacher’s schedules, and what’s feasible in a student’s day proved to be difficult for the three Phase 1 teachers.

**Summary for program evaluation question two.** Based on the data gathered from the Phase 2 teacher interviews it was evident that the nine teachers from Phase 2 and the three teachers from Phase 1 who were also a part of the Phase 2 implementation all felt that they received adequate training to implement the Wilson Reading System to fidelity. Although the teachers were not asked directly about the components of the training that they received, they indicated that the feedback was very valuable. They also found the training to be intense and the practicum to be a major contributor to the quality and quantity of feedback that made their experience even better. The Phase 2 teachers also indicated that student need determines how students are served, whether one-on-one or in a group of no more than six students. Additionally, lesson plan delivery is determined by the specific needs of the student, but also according to the number of minutes supported by their Individualized Education Program and the scheduling constraints.

### **Program Evaluation Question 3**

WADE assessment post-test score percentages and VSOL scaled scores were analyzed to answer program evaluation question 3:

Of the students who successfully exited the Wilson Reading System according to the WADE during the first three years of implementation, what percentage scored proficient on the Virginia Standards of Learning reading assessment?

As mentioned in Chapter 3, in order for a student to show mastery on the WADE post-test, students must score at least 80% or higher. The MASD's guidelines state that in order for students to successfully exit the program, students must be in Book 9 with a score of 80% or better. The VSOL grade level reading assessment uses a raw score-to-scale conversion to equate the overall score that a student receives on the VSOL reading assessment (VDOE, 2015). Passing scores range from 400 to 600. Scores that range from 400 to 499 are considered pass/proficient and scores that range from 500 to 600 are considered pass/advanced. Scores that range from 399 and below are fail/basic to fail/below basic.

A frequency count was used to examine the assessment data of the 113 participants in Phase 1 to provide information on the successful completion of Wilson Reading System as measured by the WADE and grade level mastery as measured by the grade level VSOL reading assessment. Twenty-four students out of the 113 students, or 21%, were considered as successfully exiting the Wilson Reading System as measured by the WADE post-score. Twelve out of the 24 students, or 50%, passed the VSOL with a scaled score of 400 or higher on the grade level reading assessment for the grade that they successfully exited the program. A summary table is listed below in Table 11.

Table 11

*Total Number Of Students Who Successfully Exited Wilson Reading Summary Table*

Grade	Number of students who successfully exited	Number of students who scored pass proficient
3rd	1	0
4th	9	3
5th	4	1
6th	10	8

Although there was no statistical analysis conducted to link the Wilson Reading System program to student achievement outcomes on the VSOL, noting that 80% of students who were enrolled in the Wilson Reading System program in 6th grade achieved pass proficient on the VSOL for that grade level.

## **Chapter 5**

### **Conclusion**

A prevalent gap in achievement between students with disabilities and nondisabled students remains evident in almost all areas of education today (Child Trends Databank, 2014; Hernandez, 2011; Lesnick et al., 2010). These “achievement gaps” quickly become “opportunity gaps” when students do not have the opportunity to learn foundational skills, such as reading, that will support them with being successful in life (Strauss, 2013). Not only does this become a problem of practice, it becomes a true issue of equity (Cortiella, 2006; Fuchs & Fuchs, 2006; Swanson, 1999; Swanson et al., 1996; Vaughn & Swanson, 2015). Ensuring that all students have the opportunity to learn the life skill of reading is an essential responsibility for school districts across the nation. Reading is a complex process and it is a skill on which all other skills are built (National Reading Panel, 2000). The complexity of reading and learning to read increases greatly for a student with a specific learning disability in reading (Lesnick et al., 2010; Vaughn et al., 2012). Unfortunately, because specific learning disabilities do not look alike, finding the scientifically-based, systematic instructional program to support students with specific learning disabilities in reading to mastery of the foundation skills is crucial (National Reading Panel, 2000). To combat this issue of equity, it is crucial for educators to understand the area of the specific learning disability in reading to fully support the student’s specific area of need (Vaughn et al., 2012).

Many students with learning disabilities have underlying issues in information processing or working memory, which can have a lifelong impact on an individual.

Additionally, because working memory plays such a key role in a reader's ability to build foundational skills in reading, intervention programs that are used to support the areas of deficit must be implemented to fidelity to ensure students receive adequate instructional delivery and time (Vaughn et al., 2012). However, very few studies on interventions report the influence of fidelity of implementation. In fact, O'Donnell (2008) conducted a comprehensive review of literature, which revealed there are limited studies that have assessed the impact of fidelity of implementation of K-12 interventions on student achievement. During the review of literature, it was found that there are only five studies that assess the impact of fidelity of implementation on student achievement and of those, one specifically conducted by Hall and Loucks (1977) assessed reading (as cited in O'Donnell, 2008). Hall and Loucks (1977) measured the fidelity of implementation of a reading intervention using a levels of use (LoU) of innovation interview tool with teachers to determine if teachers were or were not implementing individualized guided education in reading. The LoU uses a branching approach with questions and follow up probes (Hall & Loucks, 1977). It has eight levels: Level 0, which equals nonuse; Level I, which equates to an orientation level; Level II, is the preparation level; Level III is the mechanical use level; Level IVA, is the routine level; Level IVB, is the refinement level; Level V, is the integration level; and Level VI, is the renewal level (O'Donnell, 2008). They found that student outcomes rose when teachers' level of use were at the mechanical and routine use levels (Hall & Loucks, 1977; O'Donnell, 2008). Additionally, Benner, Nelson, Stage, and Ralston (2011) conducted a study that examined the extent to which the key elements of fidelity of implementation, adherence and quality of delivery, of an intensive reading intervention improved or inhibited the effects of a reading for 281



middle school students experiencing reading difficulties. It was found that the fidelity of implementation to the prediction of basic reading skills ( $p < .01$ ) and reading comprehension ( $p < .05$ ) was statistically significant (Benner et al., 2011). Also statistically significantly was the adherence to the delivery of the lesson plans as designed. The Benner et al. study (2011) along with Hall and Loucks (1977) showed that student outcomes are significantly improved with high-quality implementation (as cited in O'Donnell, 2008). While there is limited research on the fidelity of implementation on student outcomes, the findings from this program evaluation of the Wilson Reading system align with the findings of the previous studies mentioned above. It is evident that implementing the program to fidelity is vital to determine the impact linked to student outcomes (Dane & Schneider, 1998; Gresham et al., 1993; Hall & Loucks, 1977; Mellard & Johnson, 2008; O'Donnell, 2008).

Fidelity of implementation is composed of five key elements: adherence, exposure/dosage, quality of delivery, responsiveness, and program differentiation. This study focused on adherence, examining whether the program was being delivered as designed, and exposure, which was the number, length, and frequency of the sessions being delivered. Through a mixed-methods program evaluation of the MASD Wilson Reading System program, this study sought to determine if the adherence and exposure were aligned with the Wilson Reading System's implementation model that was used in eight of the nine elementary schools and two of the three middle schools. Additionally, this study investigated the grade level performance in reading of those students who successfully exited the program as measured by the WADE post-assessment and the

VSOL grade level reading assessment. Findings from the study and recommendations for the program as well as future program implementations are provided in this chapter.

### **Discussion of Findings**

Focused on two specific components of fidelity of implementation, this study examined processes in order to identify strengths and challenges with implementation, as well as, medium-term outcomes (Mertens & Wilson, 2012). The program theory of the Wilson Reading System framework was used to frame this evaluation. The study specifically evaluated staff training, number of students served, minutes per week administered per session, and lesson plan delivery in Phase 1 and Phase 2 of implementation in MASD.

The findings in Chapter 4 yielded important information regarding the implementation of the Wilson Reading System program, with regards to adherence and exposure/dosage. The evaluator used data from the face-to-face interviews with the Phase 1 and Phase 2 Wilson Reading System teachers, as well as, data documents from Phase 1 implementation to discover the findings. The findings related to each evaluation question and to the program in its entirety are discussed here.

**Staff training.** Mellard (2009) indicates to implement a program to fidelity, one must understand how to implement the program as intended; gather resources, as well as organize them for implementation; and adhere to implementation procedures of the program. The results from staff training yielded two overarching themes: adequacy of training and feedback. Research shows that educators who receive effective high-quality training, that includes corrective feedback, are more likely to implement the program to fidelity as oppose to those who do not (IRIS Center, 2014). According to The IRIS

Center (2014), effective high-quality training includes three components: presenting information that is relevant to implement the program; demonstrating the skill or concept that models an individual implementing the program; and providing opportunities to practice and receive corrective feedback on their performance. The results show that both teachers in Phase 1 and Phase 2 feel they were adequately trained to implement the Wilson Reading System to fidelity. The teachers in Phase 1 and Phase 2 were not directly asked to indicate the components of their training or to align their training experiences with the Wilson Language Training Corporation. However, although the three teachers in Phase 1 were trained at different times and by different trainers, all three teachers indicated that they engaged in a practicum where they were observed by a certified trainer who provided valuable feedback. They stated that they did benefit from the immediate feedback and input about lesson delivery, lesson plan writing, data collection and data analysis.

Of the nine teachers in Phase 2, a trained teacher in the district trained one teacher in 2008 and eight of the teachers were trained in the summer weeklong session that followed with an online component, one-on-one student practicum, and being observed by a trainer. The nine teachers indicated that the practicum was beneficial and provided immediate feedback and input with lesson delivery, lesson plan writing, data collection, and data analysis.

It is important that teachers understand how to implement the program as intended by ensuring that each individual complete high-quality training. To implement the program with fidelity, the teachers must adhere completely to the content, frequency, duration, and coverage prescribed by the designers (Mellard, 2009, Mellard & Johnson,

2008; IRIS Center, 2014). It was evident from the results of the interviews with the 12 teachers that there was a high level of adequacy of training, and that the teachers felt that from the training they were able to implement the Wilson Reading System to fidelity.

**Students served, minutes per week and lesson plan delivery.** The Wilson Reading System is designed to deliver instruction via small group of no more than six students or one-to-one. Teachers in both Phase 1 and Phase 2 adhered to the requirements of the number of students served. It was evident from the data collected through teacher interviews and the data document review that student needs drive the Wilson Reading System schedule that teachers implement. Teachers knowing a student's deficits, whether they are on or below grade level, the success or lack thereof with previous interventions, and the intervention that they are going to implement provides the teacher with the necessary information to make decisions based on a student's need (Vaughn et al., 2012). These factors, along with the achievement gap that a student has, drives how a teacher serves students. It was also evident that teacher preference plays a role in how students are served. For example, one teacher indicated that she preferred one-to-one because she felt she could be very prescriptive with meeting the specific needs of her student. Another teacher indicated that she preferred to do no more than four students to a group as that is where her comfort level was in terms of being able to meet all of the needs of the students in that particular group.

In addition to student needs and teacher preference, feasibility and scheduling influenced how students were served and lesson plan delivery. Time is a precious commodity in schools, so deciding how to schedule interventions is essential (Vaughn et al., 2012). Finding ways to increase learning time is one of the most important ways to

intensify academic interventions in reading (Torgesen, 2004). Although this evaluation focused on whether the Wilson Reading System was being implemented and not why it was or was not, some anecdotal themes that presented through teacher interviews were with regards to exposure. Exposure that a student has to the Wilson Reading System program is a key element of fidelity of implementation. It refers to the amount of an intervention that a participant receives and if the frequency and duration of the intervention is as the designers prescribed (Mellard & Johnson, 2008). The teachers in both Phase 1 and Phase 2 indicated that from their experiences, the required 45 minutes of instruction five days a week is ideal and supportive of student growth, yet they expressed within their context, scheduling that amount of time around the master schedule presented as a barrier. Teachers indicated that “fitting it all in” within the parameters of ensuring students are getting what they need without missing other important content or requirements is difficult. One teacher indicated that she works with special education case managers of the students she serves through the Wilson Reading System program. She stated “we strategically chose to focus on the decoding and encoding and not the third block because their decoding was low. Ideally, I’d love to add more of it in, it’s just a time pressure.” Another teacher stated that when she pulls students out of class she recognizes that there becomes a disconnect “Yes, Wilson is super valuable and yes they need it, but you also have to find time for whatever they miss from class too.”

Adapting the contents, such as the sequence of lesson plan block delivery, can negatively impact the effectiveness of the program. The IRIS Center (2014) recommends that changes to the contents should only occur after first implementing the program with

fidelity in order to practice implementing as it is intended. In addition, changes should only be made one component at a time in order to determine which change made the program less or more effective. Through the teacher interview data, it was not evident whether the changes in frequency and duration were done simultaneously with the changes of the lesson plan delivery or because of one or the other. However, to increase the likelihood of the program achieving the results as intended, adherence to the program's implementation model should be followed.

**Successfully exiting the program.** In this study, the researcher did not conduct a statistical analysis using the WADE post-assessment scores of the students who successfully exited the program and the VSOL grade level reading SOL, and therefore, it is difficult to attribute achievement or lack thereof to the program. It was evident from the teacher interview data and the data document review that there are inconsistencies with adherence and exposure among the Phase 1 and Phase 2 teachers due to using the program in accordance with student needs, teacher preference, feasibility, and scheduling. Additionally, during the data document review, it was discovered that eight of the 113 students who received Wilson Reading System instruction during Phase 1 of implementation did not have WADE post-test scores recorded in order to be considered a part of the 24 students who successfully exited the program. Inaccuracies of data collection and reporting affects the ability to attribute achievement or lack thereof to the implementation of the Wilson Reading System in Phase 1. Again, this study did not focus on any causal connections between the program and student achievement. However, it is noted that 80% of the students in 6th grade receiving Wilson Reading System instruction passed the 6th grade reading VSOL. Students are able to begin the Wilson Reading

System program beginning in second grade and ending in eighth grade. One could assume that the longer a student is in the Wilson Reading System program the better their chances are of being on grade level; however, this study did not conduct a data analysis to determine this to be evident.

**Summary.** As mentioned in the literature review, Mellard (2009) reports that there are five key elements of fidelity: adherence, exposure/duration, quality of delivery, program differentiation, and student responsiveness/engagement. This study focused on two of the five key components: adherence and exposure. According to the IRIS Center (2014):

when educators adapt a practice or program with proven success by omitting or changing any of its components, they may well render it ineffective. Whenever a change is made to a core component—what is taught, how it is taught, or the amount of time it is taught—you significantly increase the risk of not achieving the expected outcomes.

Often educators implement an evidenced-based program, like the Wilson Reading System, yet may not see the desired results. Adherence to the requirements of implementation of the program helps to determine the effectiveness of the intervention and links student outcomes to instruction (Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008). Yet adherence can often be the most difficult thing to do when working with programs like the Wilson Reading System. Many obstacles present themselves when implementing programs such as students' response to the program, being able to staff the support necessary to implement the program, and accommodating

for the many differences among students and schedule that allow for the program to be implemented to fidelity.

This study is limited because it focused on two of the five components of fidelity of implementation. It is evident from the results of this study that factors such as scheduling, student needs, teacher preference, and feasibility play a role in adherence and exposure. As a result of two of the five components of fidelity of implementation being affected, the other three components should be examined to see the impact that adherence and exposure play in implementing the Wilson Reading System to fidelity.

### **Recommendations for Programming**

Based on the findings of this study, the evaluator found that there are inconsistencies between the program implementation model and the implementation in Phase 1 and Phase 2 of implementation in MASD. It is evident that these inconsistencies were created based on student need, feasibility, scheduling, and teacher preference. Although student need is very specific and this should be at the base of decision making for instructional delivery, the other factors such as scheduling and feasibility may be an avenue to explore to support adherence and exposure. One way to work with supporting teachers with these components is getting building level administrators, school counselors, and district level personnel involved with the scheduling process. Additionally, incorporating all stakeholders in a process of conducting fidelity checks would also provide insight into why a program is or is not being implemented to fidelity. Fidelity checks are an important part of ensuring that a program is being implemented with fidelity (Mellard, 2009). The involvement of school district personnel, building level administration, and school counselors, in collaboration with case managers and Wilson



Reading System teachers through fidelity checks would open up communication about the program and support a better understanding of its implementation.

In addition to the fidelity checks, developing a system for providing on going professional development and learning that will continue to develop consistency with program delivery is recommended. It was evident through the Phase 1 and Phase 2 interviews that teachers found great value in the type of training they received, specifically noting how valuable the feedback was to ensuring they were adequately trained. Ongoing support should have a goal of maintaining and improving skills, maintaining commitment and motivation for teaching the program, addressing any issues that arise, and preventing any inadvertent changes to the program that may occur due to time constraints or personal preference (IRIS Center, 2014).

Along with providing ongoing professional development to those who teach the Wilson Reading System instruction, it would also be beneficial to provide professional learning to principals and assistant principals who have Wilson Reading System teachers teaching in their buildings. This professional learning would ensure that these instructional leaders know how the program works so that they are able to provide observation feedback to the Wilson Reading System teacher, create schedules that support students receiving this service and not adversely impacting their other coursework, and support classroom teachers who also serve students who receive the specialize instruction. Fidelity of implementation requires changes in behaviors and therefore, continuous training and learning, modeling, coaching, and teaching could lead to more consistency with adherence to the program implementation model.

Another recommendation for programming would be for the district to build an infrastructure for a robust data collection system. The means by which data were collected in Phase 1 was by one teacher receiving all of the WADE pre- and post-test scores and inputting them into a Word document chart for all students served by the Wilson Reading System program. Those data were delivered in person or via email to the director in the district, but where it was housed was not indicated. An infrastructure for collecting multiple sources of data could eliminate the loss of future data, and ensure that data are accessible when making decisions about instruction.

A last recommendation would be in reference to creating additional time for the program to be implemented. Through anecdotal notes, themes surfaced concerning schedules being barriers to fidelity of implementation. Additionally, teachers in Phase 2 indicated that serving as a special education case manager along with serving as the Wilson Reading System teacher created time constraints with “getting it all done.” To support a solution for the issue of time that negatively affect fidelity of implementation, it might serve the district and the students well to allocate additional resources such as funding to supporting positions to allow the program to be implemented to fidelity.

### **Recommendations for Future Evaluation and Research**

This program evaluation focused on fidelity of implementation of the Wilson Reading System with students with specific learning disabilities in reading. It is evident that there is very little research to support that the Wilson Reading System has positive or negative effects on improving students’ reading outcomes for students with specific learning disabilities in reading. In fact, as mentioned in the literature review, WWC reported out of 28 studies published about improving reading from 1989 to 2009, only

one out of nine examined met evidence standards for alphabets (IES, 2007). Therefore, it would be advantageous to conduct a future evaluation again once the program is implemented to fidelity and examine the program's impact on student achievement outcomes. When implemented without adequate fidelity or adequate dosage the program could be rendered ineffective; however, it would be interesting to see if controlling for treatment fidelity had any type of impact on the results of the program evaluation.

Additionally, further research on the pre- and post-test tool of the program, the WADE assessment, is necessary in order to collect validity and reliability data. Currently there is a lack evidence that shows validity and reliability data for the WADE assessment. Although the Wilson Training Corporation states that the WADE assessment is a criterion-referenced assessment, which is one component of valid measures, there are no data to support the claim. Furthermore, there is lack of evidence of reliability (Creswell, 2014). This is an area of need, especially if school districts are using the WADE assessment post-score as the only data point that shows that a student is ready to successfully exit out of the program.

Moreover, evaluating the program once there is an infrastructure for collecting robust data to see if student achievement can be attributed to the treatment would be beneficial. Having a system for collecting and housing student achievement data will aid stakeholders with making decisions about the program's effectiveness, funding for the program, and instructional decisions to support closing the opportunity gaps for students with specific learning disabilities in reading. It would also be interesting to compare implementation models of like school districts in Virginia to the MASD and the Wilson Reading System implementation model to determine if there are similarities and

differences. Additionally, gaining insight from general education teachers who have Wilson Reading System students in their classes through teacher interviews to see if they are seeing positive results of those who are participating in the program. Gaining additional stakeholder input from the general education teachers would help to support an understanding of how the students are being impacted by the Wilson Reading System instruction across the instructional settings. Student achievement data could then be examined to see if there is an impact as a result of the different implementation models.

### **Conclusion**

Learning to read is a life skill that is vital to the overall success of an individual. It is essential that schools and school districts provide students with the opportunity to learn the components of reading instruction: phonological awareness, phonics, vocabulary, fluency and comprehension. However, because specific learning disabilities in reading do not all look alike, finding the correct method of teaching these components is not always easy. In addition, discovering what exactly works does not solve the problem if the program is not implemented to fidelity. Implementing a program improperly can lead to failure just as if the wrong program was implemented that is not designed for a student with a specific learning disability in reading. It will be crucial for the MASD to ensure the key components of fidelity with the implementation of the Wilson Reading System across the eight elementary schools and three middle schools. Additionally, incorporating a fidelity check system with district level personnel, as well as, a system for continuous training, follow-up, progress monitoring, and data collection will support fidelity of implementation, create pathways of open communication, and support an understanding of the success and challenges of implementing the Wilson Reading System program.

**Appendix A**

**Sample Electronic Word Document Chart for Compiling Wilson Reading System Teachers' Schedules and Student Data.**

		2013 – 2014			2014 - 2015			2015 - 2016			2016-2017	
Student Number	School	Grade	Frequency	WADE Post-test	Grade	Frequency	WADE Post-test	Grade	Frequency	WADE Post-test	Grade	Frequency

## Appendix B

### Teacher Interview Protocol

**Purpose of the Study:** The purpose of this interview is to describe the way in which this school district implemented the Wilson Reading System and to discover the successes and challenges the teachers face with the implementation of the program. I appreciate your voluntary participation in this study and want to remind you that the interview is being recorded for purposes of transcribing the interview, but your answers will remain confidential.

#### **Key Questions**

1. Describe the training that you received to implement the Wilson Reading System program. After you went through this training, what was your understanding of what you would have to do to implement with fidelity?
2. Do you deliver instruction to small groups or 1:1? If you serve students in a group setting, what is your least number of students served in a group setting? What is your greatest number of students served in a group setting?
3. How much time do you spend delivering Wilson Reading a week?
4. According to the Wilson Reading System, group lessons for no more than 3-6 students can be done three times per week for 90 minutes or five times per week for 45. Describe what happens during the group lessons.
5. Each lesson is comprised of three blocks. How often do you deliver a lesson that contains the three blocks? Describe what happens in each of the three blocks.
6. What barriers prevent you from following the suggested lesson plan?
7. Are there any other things about Wilson Reading that you would like to share before we finish?

**Thank you all for your participation in this interview today!**

**Appendix C**  
**Wilson Reading System Teacher Interview**  
**Participation Letter and Informed Consent**

**Title:** “An Evaluation of Wilson Reading: A Program Created to Improve Reading Outcomes of Students with Disabilities”

**Principal Investigators:** Amy H. Stamm and Dr. Leslie W. Grant

**Purpose of the Research:** The purpose of this study is to evaluate implementation of the Wilson Reading System in the Mid-Atlantic school district (MASD). The evaluator will explore in what ways, if any, the implementation over the last three years and the current year relates to the implementation model suggested by Wilson Reading. The following instrument is part of a doctoral dissertation with the College of William and Mary School of Education. Amy Stamm, in conjunction with MASD is conducting an outcome evaluation of the Wilson Reading System. The results of this survey will help to provide descriptions of the program implementation and will help supplement the student achievement outcome data that will be collected for this study.

**Procedures:** You will be asked to participate in a face-to-face semi-structured interview that includes pre-interview questions related to your role as a trained Wilson Reading System teacher. The interviews will be audio-recorded and you will have the opportunity to review the transcripts to ensure clarity or provide feedback.

This interview should last approximately 60 minutes at a time and location of convenience to you.

**Discomforts and Risks:** There are no known risks associated with this study. You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

**Benefits:** Your perspectives on the implementation of the Wilson Reading System in MASD will be extremely valuable toward learning about the implementation of the program. Your participation will provide context and help the school district better understand the student achievement outcomes. Your timely and thorough participation in this interview is greatly appreciated.

**Confidentiality:** Your responses will be kept confidential. For the purposes of this study, teachers will be identified by numbers to restrict access to your identity. While the evaluator, dissertation chair, and the College of William and Mary Education Institution Review Committee (EDIRC) may review the interview responses, your identity will not be revealed in any publication of the interview results.

**Voluntary Participation:** Your participation in this study is completely voluntary and you can withdraw at any time. You are free to skip any question that you choose.

**Questions:** If you have any questions about this project or if you have a research related problem, you may contact Amy Stamm at (804-761-6312), her dissertation chair, Dr. Leslie Grant at (757-221-2411), and/or the College of William and Mary Education Institution Review Committee (EDIRC) (Phone: 757-221-235).

**Consent:** You have been informed of the purpose of this study and your voluntary participation has been explained. You have been provided an opportunity to ask questions about the interview and freely volunteer to participate. By signing below, you confirm that you have read the information above and consent to participate in the interview.

**I am aware that I must be at least 18 years of age to participate in this study.**

I am aware that I may report dissatisfactions with any aspect of this study to Dr. Tom Ward, Chair of the Education Institutional Review Committee by telephone (757-221-2358) or email (tjward@wm.edu).

I agree to participate in this study and have read all the information provided on this form. My signature below confirms that my participation in this project is voluntary, and that I have received a copy of this consent form.

\_\_\_\_\_ date \_\_\_\_\_  
(signature)

\_\_\_\_\_ date \_\_\_\_\_  
(witness)

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2017-06-15 AND EXPIRES ON 2018-06-15.



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