

Making a Case for Using Effective Reading Programs

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According to the National Assessment of Adult Literacy (NAAL), an estimated 93 million adults in the United States lack the reading skills necessary to effectively contribute to society (White, 2003). Only an estimated half of American adults can read at an 8th grade level (Kirsch, Jungeblut, Jenkins, & Kolstad, 2002). Even worse, in May 2017, the National Center for Education Statistics published a report which highlighted the reading results from the 2015 National Assessment of Educational Progress (NAEP). This report further indicated awfully low performances by American students: only 36 percent of 4th graders, 34 percent of 8th graders, and 37 percent of 12th graders scored at or above proficient (McFarland et al., 2017, p. 157).

Students who struggle in reading in early elementary school are more susceptible to continue reading poorly as they progress in school (Menziez, Mahdavi, & Lewis, 2008, p. 67). With that said, students “are [also] spending less time reading, reading comprehension skills are eroding, and these declines have serious civic, social, cultural, and economic implications” (Office of Research and Analysis, 2007, p. 7). Consequences include less time spent exercising, a decrease in the likelihood of voting, and being less culturally responsive to others. Becoming a successful reader is critical to being a successful citizen: “Advanced readers accrue personal, professional, and social advantages, [while] deficient readers run higher risks of failure in all three areas” (Office of Research and Analysis, 2007, p. 16). According to Cunningham and Stanovich (1998), reading is integral to a person’s life:

Reading has cognitive consequences that extend beyond its immediate task of lifting meaning from a particular passage. Furthermore, these consequences are reciprocal and exponential in nature. Accumulated over time—spiral either

upward or downward—they carry profound implications for the development of a wide range of cognitive capabilities. (p. 1)

The economy and business organizations are affected by low reading proficiencies. In fact, remedial reading courses are estimated to cost more than \$3.1 billion for large corporate employers and \$221 million for state employers” (The National Commission on Writing, as cited in Office of Research and Analysis, 2007, p. 16). Effective reading instruction remains a critical piece to society and schools need to implement effective reading programs in early elementary school to ensure students are provided with the skills necessary to read proficiently.

The five most important components of reading instruction are fluency, vocabulary, phonics, comprehension, and phonemic awareness (Dawson, 2016). The aforementioned statistics about the current state of affairs in education highlight the innate need for a reading program that includes these five essential elements. Wilson Foundations is a reading program for grades K-3 that was developed with these five components in mind. It claims to provide “all students in K-3 classrooms with a systematic program in the foundational skills for reading and spelling, emphasizing phonemic awareness, phonics-word study, high frequency word study, fluency, vocabulary, handwriting, and spelling” (Wilson Language Training Corporation, 2014, p. 2). The entire program focuses on the processes involved in teaching these skills and analyzing the outcomes to make further decisions in instruction and intervention. This paper serves as a review of research, which is needed to examine these five instructional components in order to determine their effectiveness in overall reading instruction, while also providing a background of the Wilson

Fundations program to offer a better sense of understanding surrounding its supporting research.

Phonemic Awareness

A fundamental component of reading instruction is phonemic awareness, which is one's ability to break up spoken words into individual sounds. According to the National Reading Panel (2000), letter recognition and phonemic awareness to be the two most critical pieces of reading instruction for students learning how to read within their first two years of schooling. In fact, these two skills are correlated with early prediction of reading success, as well (National Reading Panel, 2000). In general, the English language has 41 phonemes through which syllables and words are created. Phonemic awareness is an integral part of learning to read because English writing is focused on the alphabet and when equipped with phonemic awareness, readers are able to attack new words by separating sounds within words to assist with pronunciation. The difficulty involved in this process highlights the importance of developing phonemic awareness skills very early on in reading acquisition.

Phonemic awareness has a large effect size on reading achievement, which underscores the importance of phonemic awareness within reading instruction. For instance, based on the results from a meta-analysis of 52 studies, the National Reading Panel (2000) found that phonemic awareness has an overall effect size of 0.86 and in turn, has an effect size of 0.52 on reading outcomes and 0.59 on spelling (p. 2-3). High correlations have been found between phonemic awareness instruction and students learning to read, as well (Lieberman, Shankweiler, Fischer, & Carter, 1974; Share, Jorm, Maclean, & Matthews, 1984). In fact, Bradley and Bryant (1983) claim to have found a causal relationship between the two. With that said, "phonological awareness measures administered in kindergarten or earlier are superior to I.Q. tests as predictors of future reading achievement" (Stanovich, 1993, p. iii). It is evident that "phonemic [awareness] instruction is effective in teaching

children to attend to and manipulate speech sounds in words" and helps students learn how to read (National Reading Panel, 2000, p. 2-5). Without a strong command of phonemic awareness, students are unable to acquire vocabulary, read fluently, independently comprehend text, and decode unknown words.

Hattie (2009) summarized the benefits of phonemic awareness instruction on students from all socioeconomic statuses: "The effects of phonemic awareness were as great with low as with middle and high socioeconomic status students" (p. 134). Learning how to effectively break words into their corresponding sounds also enhances reading comprehension for students, which emphasizes the interrelated nature of reading instruction. However, teaching phonemic awareness, alone, cannot assure reading success, which further highlights the importance of utilizing multiple components of reading instruction simultaneously (National Reading Panel, 2000). In all, Snow, Burns, and Griffin (1998) underscored this assertion:

Adequate progress in learning to read English beyond the initial level depends on having established a working understanding of how sounds are represented alphabetically, sufficient practice in reading to achieve fluency with different kinds of texts written for different purposes, instruction focused on concept and vocabulary growth, and control over procedures for monitoring comprehension and repairing misunderstandings. (p. 223)

Phonics

Phonics instruction is a teaching strategy that aims to teach students the letters of the alphabet and the sounds that each letter makes. In turn, students are able to decode words by separating the sounds of each letter. Sounds include consonants, short and long vowels, digraphs, and blends. Students must be explicitly taught phonics so they are equipped with a strong foundation for phonemic awareness; however,

phonics instruction should not be confused with phonemic awareness instruction, as phonemic awareness instruction “entails teaching students how to use grapheme-phoneme correspondences to decode or spell words” (National Reading Panel, 2000, p. 2-5).

In most elementary schools, teachers use a systematic phonics program that teaches these skills in a sequential format, across multiple grade levels. Hattie (2009) asserted that phonics instruction has an effect size of 0.60 and direct instruction has an effect size of 0.59. With this in mind, the Wilson Foundations program combines these strategies together: teachers use direct instruction to deliver phonics instruction to students. However, Ryder, Burton, and Silberg (2006) compared phonics instruction using both direct instruction and non-direct instruction and found that “although all students improved their decoding ability, direct instruction students exhibited no advantage over more traditional approaches” (p. 189). On the other hand, Rupley, Blair, and Nichols (2009) highlighted the fact that while direct instruction can be effective in phonics instruction, “this approach is not successful with all types of [instructional] objectives and can be misused” by teachers in the classroom (p. 136). Likewise, teachers need to be able to use more than direct instruction when teaching phonics and need to also understand that increasing the repertoire of teaching strategies increases the likelihood that students will be successful. In all, “good readers are good decoders [and] direct instruction [of phonics] guides students to develop flexible, problem-solving attitudes toward identifying words using the available cue systems—whole word recognition, phonics, structural analysis, and context” (Duffy, as cited by Rupley et al., 2009).

Fluency

Fluency is the “ability to decode a word with relative ease with no hesitation [and] is [typically] developed through an abundance of teacher-directed explicit practice in reading text” (Samuels, as cited in Rupley et al., 2009). Fluent readers have the

ability to use speed, while simultaneously focusing their attention on punctuation to guide their sense-making of any given text. In fact, students are deemed fluent through the acquisition of accuracy and speed skills (Schreiber, 1980, p. 178). A meta-analysis of more than 70 studies from PsycINFO and ERIC found that fluency instruction has an effect size of 0.41 on reading attainment and 0.35 on reading comprehension (National Reading Panel, 2000). There is a “preponderance of empirical and clinical evidence [that] supports the relationship of fluent oral reading and good overall reading ability” (Allington, 1983, p. 560). This underscores the importance of becoming a fluent reader.

There are three themes that emerged from the research, in terms of the best way for students to become fluent readers: (a) increasing the number of books read, (b) independent reading, and (c) repeated readings. Cunningham and Stanovich (1998) pointed out that a student’s fluency is positively impacted by the sheer number of books he or she reads (p. 5). Schools have consistently tried developing programs or times within their master schedules to plan for independent reading time, as there was an inclination that students’ fluency could increase with very little direction (National Reading Panel, 2000, p. 3-1). These programs include: (a) Accelerated Reader (AR), (b) Drop Everything and Read (DEAR), and (c) Silent Reading (SSR). On the other hand, “fluency is [also] developed through an abundance of teacher-directed explicit practice in reading text” (Samuels, as cited in Rupley et al., 2009, p. 132). Repeated readings of the same text is another strategy used to enhance students’ overall fluency (Schreiber, 1980, p. 177). This involves teachers modeling reading fluently and students independently, or with a partner, rereading the text, using intonation and speed. While the National Reading Panel (2000) found a 0.41 effect size for explicit fluency instruction, including repeated readings, “these studies failed to find a positive relationship between encouraging [silent and independent] reading and either the amount of reading and reading achievement” (p. 3-3). In all, fluency matters because when students struggle with

automaticity of words and decoding, it leads to a reduction in the cognitive capacity available for students to achieve reading comprehension. Said differently, “if the word recognition task is difficult, all available cognitive resources may be consumed by the decoding task, leaving little or nothing for use in interpretation” (National Reading Panel, 2000, p. 3-8).

Vocabulary

Vocabulary instruction has an effect size of 0.97 on reading comprehension and direct instruction has long been documented as the most effective method of instruction for vocabulary acquisition (Stahl & Fairbanks, 1986, p. 72). Beck, McKeown, and McCaslin (1983) declared that there are competing methods for vocabulary instruction:

Traditional vocabulary instruction is based on the assumption that word meaning is best taught through the presentation of a word in context rather than through definition-based instruction; [however] it is not true that every context is an appropriate or effective instructional means for vocabulary development. (p. 177)

Vocabulary acquisition occurs differently for students than in some of the other areas of reading instruction, as “the bulk of vocabulary growth during a child’s lifetime occurs indirectly through language exposure rather than through direct teaching” (Cunningham & Stanovich, 1998, p. 2). Students’ vocabulary systems expand immensely without direct instruction from teachers (Nagy, Herman, & Anderson, 1985, p. 234). Vocabulary development increases at a much greater frequency by increasing the quantity of texts read, not through oral language. The sheer number of unique words present in texts outnumber those in oral language. Moreover, “what is immediately apparent is how lexically impoverished most speech is, as compared to written language” (Cunningham & Stanovich, 1998, p. 2). Not surprisingly then, “children’s books have 50 percent more rare words in them than does adult

prime-time television and the conversation of college graduates” (Cunningham & Stanovich, 1998, p. 3).

The context of the learning environment seems to matter the most for struggling readers, as Beck et al. (1983) argued: “Children most in need of vocabulary development, less-skilled readers who are unlikely to add to their vocabulary from outside sources, will receive little benefit from such indirect opportunities” (pp. 180-181). In fact, “contexts occurring in text selections do not reliably assist readers in discovering the meanings of unknown words” (Beck et al., 1983, p. 180). Successful vocabulary programs offer students “repeated and varied encounters with the instructed words” (Beck et al., 1983, p. 181). Vocabulary instruction is also a necessary tool for overall reading improvement and has a strong correlation to reading comprehension (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983). While there is evidence of a strong correlation between vocabulary and reading comprehension, studies have yet to find a causal relationship between the two because, as McKeown et al. (1983) stated, “A difference [that] exists between acquiring knowledge of a word’s meaning and knowing the word well enough to aid comprehension of a text” (p. 4).

Comprehension

Reading comprehension is the ultimate goal of reading instruction and has an effect size of 0.85 (National Reading Panel, 2000). Reading comprehension refers to a student’s ability to understand the meaning of text. The National Reading Panel (2000) conducted a meta-analysis of 203 comprehension studies and found that there are seven instructional strategies that improve reading comprehension: (a) comprehension monitoring, (b) cooperative learning, (c) graphic and semantic organizers including story maps, (d) question answering, (e) question generation, (f) summarization, and (g) multiple strategy instruction (p. 4-42). With that said, reading comprehension has undergone an expansion of skills that need to be considered during instruction:

The concept of reading comprehension has been expanded to include background

knowledge, text structure, flexible use of knowledge, reader habits, fluency, automatic word recognition, automatic word knowledge, and the orchestration of skills that support one another in a variety of ways. (Rupley et al., 2009, p. 133)

Beck et al. (1982) acknowledged how reading comprehension is impacted by the other components of reading instruction: “Reading comprehension requires accuracy (knowing word meanings), fluency (speed of lexical access), and richness (semantic network connections)” (p. 508).

Background of Wilson Foundations

Wilson Foundations is a reading program developed with the aforementioned components of reading instruction in mind and it is important to analyze the empirical studies that have been conducted to evaluate the program. Wilson Foundations consists of daily, thirty-minute lessons delivered to the entire class. Within each lesson, there are several activities that students participate in, all aiming to build on previously-learned skills, while also teaching students new skills they can practice. The overall goal of Wilson Foundations is for students to acquire the skills necessary to become proficient in the five components of reading instruction: phonics, phonemic awareness, fluency, vocabulary, and comprehension. Wilson Foundations “was designed for use in [these] situations: (a) preventatively, in grades K-3, for whole group instruction; (b) as an intervention for the targeted lowest 30th percentile of student readers; or, (c) for students with language based learning disabilities, as intensive instruction” (Florida Center for Reading Research, 2004, p. 1).

Response to Intervention

“Children who are identified as poor readers in first grade are more than likely to remain poor readers in fourth grade;” therefore, it is crucial to develop an intensive school-wide intervention plan

for students who struggle in reading (Menziez et al., 2008, p. 67). Schools that use the Response to Intervention (RTI) model to identify and meet the needs of struggling students, Wilson Foundations provides “scientifically-based instruction in Tier 1, as well as an early intervention program for students at risk for reading difficulties” in Tier 2 (Wilson Language Training Corporation, 2014, p. 2). Wilson Foundations consists of whole group instruction, while also providing a Tier 2 intervention program that it calls *Double Dose*. Double Dose is an intensive, progress monitoring program, aimed at bringing students from Tier 2 back to Tier 1 through targeted, small group instruction, based on daily formative assessments and end of unit assessments. These targeted lessons are taught three to five times per week, in addition to the everyday lessons.

Teachers are expected to implement Wilson Foundations in their classrooms with fidelity. As a scripted program, teachers are supposed to stick to the program as much as possible, while identifying struggling students and providing Double Dose to them as necessary. Within each daily lesson, there are “specific guidelines provided to address the needs of advanced students, English Language Learners (ELL), and struggling students who may need differentiated support” (Wilson Language Training Corporation, 2014, p. 3).

Case Studies

The search for research on the Wilson Foundations program was challenging, mainly due to the limited number of studies available on the *Education Research* database. On the Wilson Foundations website, general research is cited that supports the use of daily phonics instruction in the classroom, but not specific research that supports Wilson Foundations itself. Most of the studies were found in dissertations, rather than articles in peer-reviewed journals. In all, there were two dissertations that measure the effectiveness of Wilson Foundations, alongside a study that attributes the reading growth in a school to the use of Wilson Foundations.

Wilson Foundations Double Dose. Goss and Brown-Chidsey (2012) conducted a study to measure the differences in effect of Reading Mastery and the Double Dose intervention from Wilson Foundations. Twelve first-grade students from two different classrooms were selected as participants in this study. Each student received Wilson Foundations instruction as their Tier 1 reading program. Goss and Brown-Chidsey (2012) compared “the reading scores of students who had the same Tier 1 instruction but different Tier 2 instruction, [as] the relative effects of the two interventions could be observed” (p. 67). The researchers used the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment to measure reading progress through the two Tier 2 interventions for two months: Reading Mastery and Wilson Foundations Double Dose. Students were progress-monitored weekly using the Non-sense Word Fluency (NWF) and Oral Reading Fluency (ORF) benchmarks within DIBELS. Similar to DCPS, a paraprofessional was trained through the Wilson Language Training Corporation and provided the Double Dose intervention to the students in the group. All students receiving Tier 2 intervention made progress; however, four out of the six students receiving Reading Mastery intervention exceeded their winter benchmarks while none of the students receiving Wilson Foundations Double Dose met their goals for NWF and ORF. Overall, Reading Mastery “yielded faster success for at-risk students’ reading outcomes when used at Tier 2” (Goss & Brown-Chidsey, 2012, p. 71). While students who received Reading Mastery as their intervention increased more, the authors provided no evidence that this difference in achievement was caused by the Reading Mastery program.

Students’ reading ability. Gibson (2016) designed a dissertation study to conclude whether or not the Wilson Foundations program “would increase the students’ overall reading ability,” as shown on the DRA2, Early STAR, STAR offered by Renaissance Learning, SAT-10, and Missouri Assessment Program (MAP) assessments (pp. 45-46). The researcher argued that the assessments used

within this study produce data “that could better inform other schools and district that are trying to determine if Wilson Foundations is the right intervention for their reading programs” (Gibson, 2016, p. 46). She used a mixed-methods approach, which included surveying teachers’ perceptions of the effectiveness of Wilson Foundations, and student achievement across assessments. In all, the sample size consisted of sixty-five students in grades kindergarten through third grade. Gibson (2016) declared that “the results of the research study support the need to use a variety of assessments to determine the reading ability of a student” (p. 95). Teachers also agreed that there was a need for the Wilson Foundations program to be used at their school.

Students with special needs. Sessa (2003) designed a thesis study to determine the effectiveness of the Wilson Foundations program in second grade for students with mild to severe special needs. She found that “100% of the second-grade sample increased their spelling and phonemic awareness skills” (Sessa, 2003, p. ii). Sessa’s (2003) sample size included four students in a special education program in New Jersey. Between September and March of that school year, these “students received consistent, scaffolded instruction as they have made progress through Level 1 of the Foundations program” (Sessa, 2003, p. 21). Notable increases in this six-month study included areas such as phonological awareness and spelling. It is worth mentioning that these students were receiving Wilson Foundations instruction at Level 1, which means first grade, while they were in second grade. There was no indication of a goal for students to make growth toward their grade-level goals, as these students were receiving instruction below their current grade level. The results from this study should be taken with caution due to the small sample size used.

School-based evidence. One way that Wilson Foundations explains support for its program is through the evidence of its success in schools. Montanari (2013) explained that by using Wilson Foundations in an elementary school in Triton,

Massachusetts, student achievement in reading increased. After learning that only 50% of students in kindergarten and first grade were reading at grade level, Montanari (2013) devised a plan to provide these struggling readers with a reading program that would address their needs: Wilson Foundations. As a leadership team, the Title 1 director, reading specialist, data coaches, and principal provided teachers with training and support to ensure Wilson Foundations would be taught with fidelity. Coaching and peer observations were used to provide teachers with opportunities to master the teaching of Wilson Foundations and its activities and routines.

Students in K-3 participated in Wilson Foundations lessons as part of their thirty-minute *word study* block during the school day. When creating the master schedule, the principal developed a forty-five-minute time block, called *What I Need (WIN) Time*. This time ensured students in need of Tier 2 or Tier 3 instruction would receive Double Dose. Using DIBELS as the data source, Montanari (2013) reported how Wilson Foundations helped increase student achievement in reading in grades K-3:

The DIBELS (core) data showed that at the beginning of kindergarten 50% of students were at or above benchmark. The year ended with 82% of the students meeting benchmark. There was even more growth in first grade as the grade began with only 39% at/above benchmark and ended with 83%. Second grade showed adequate results with 70% meeting benchmark at the end of the year. The first full year implementation of Level 3 yielded 84% of students meeting benchmark. (para. 16)

Montanari (2013) warned, “According to Implementation Science research, complex programs take approximately 2-4 academic years to achieve full implementation. Therefore, early evaluations should themselves be evaluated with caution” (para. 8).

Critique of case studies. While the researchers from the case studies made claims about

the effectiveness of the Wilson Foundations program, the statistical significance of these gains is unknown. Only Goss and Brown-Chidney’s (2012) study used a control group and even then, the researcher merely compared student progress on DIBELS against the Reading Mastery program. Overall, the findings from these studies are not generalizable to another population of students and are limited to the small sample size from their own contexts. The major component missing from these studies is an insight into the effectiveness of Wilson Foundations for a whole classroom of students, primarily as a Tier 1 program. The implications from these small-scale studies highlight the necessity to evaluate Wilson Foundations as a Tier 1 program within a school, in order to determine its effectiveness on student achievement in reading.

Conclusion

Schools need to be using effective reading programs to ensure students become effective readers early on in their education. Although the high school graduation rate has reached an all-time high at 83%, there are still more than 4,000 students who drop out of school every day (McFarland et al., 2017, p. xxix; National Education Association, 2017, p. 5). With that said, “students’ low level of engagement in their education has been considered...an important factor leading to higher dropout rates” (Caraway, Tucker, Reinke, & Hall as cited in Suh & Suh, 2007, p. 297). According to Suh and Suh (2007), “Early prevention is one of the most often cited strategies for school completion” (p. 298). Early intervention in school has substantial effects on the high school dropout rate (Fuerst & Fuerst, as cited in Temple, Reynolds, & Miedel, 2000, p. 32). Barrington and Hendricks (as cited in Suh & Suh, 2007) indicated that there are “connections between measures of academic performance in early elementary school and dropout behaviors before high school graduation” (p. 298). These researchers highlight the importance of early elementary education and ultimately, the importance of finding an effective reading program.

Through the review of literature, the importance of phonemic awareness, phonics, fluency, vocabulary, and comprehension for overall reading instruction were introduced and analyzed. It became evident how interrelated each of these components are to each other, and Chall (1989) pointed out, "The advantage of phonics [instruction] in beginning reading is in facilitating word recognition and fluency, which in turn facilitate reading comprehension, which in turn opens the world of books to children" (p. 524). Said differently, these components are part of a continuum in which some components need to be taught before the others and becoming successful in one area increases the likelihood that a student will be ready for instruction in the next area. Wilson Foundations utilizes the research behind these components to ensure the program provides a research-based foundation; however, this is not enough. Wilson Foundations needs to be evaluated as a fully-functioning Tier 1 reading program, something necessary for it to be labeled as an effective, research-based program. An exhaustive search on the *Education Research* database revealed very few studies about its effectiveness. With this in mind, the limited number of studies available on Wilson Foundations' effectiveness highlights the need for a program evaluation, especially because of its scripted nature and the necessity for fidelity of implementation. Even on its website and publications, Wilson Foundations discusses studies from the 1980s and 1990s, often citing the research behind the Wilson Reading Program, which is a different program. When examined further, it should be highlighted that the Wilson Reading Program's evidence should not be viewed as evidence for Wilson Foundations. In fact, Wilson Foundations was not published until 2002, so the research between 1980 and 2000 is irrelevant to the Wilson Foundations program and should not be used in determining its effectiveness. With this in mind, a program evaluation of the Wilson Foundations program is needed to determine whether or not it is an effective program, for with this knowledge, school leaders can use the findings to guide their selection of an effective reading program.

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