Why a Structured Phonics Program is Effective
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Cognitive psychologist and reading researcher Mark Seidenberg (2017) points out that a paradox of reading among those who do it well is they have little to no idea of how they do it. While there is certainly more to learn, the scientific research exploring the highly complex task of reading and how to teach it to children is immense. The National Reading Panel (2000) compiled the research findings to date regarding effective reading instruction some 17 years ago. Yet, poor reading achievement in the United States continues to be a persistent problem. Numerous research findings have suggested that too few children are acquiring the *decoding and fluent reading* skills necessary to become competent readers. We propose that one reason for these poor outcomes is the preponderance of initial reading programs that fail to provide students with adequate phonics knowledge. In this paper, we briefly review some of the research findings that highlight the challenges with phonics knowledge and reading fluency attainment. We then make the case that structured phonics is the most effective reading curriculum for ensuring students acquire knowledge of the letter-sound correspondences that are fundamental to becoming successful readers. Finally, we review several reading programs that exemplify the elements of a program allowing students to acquire the requisite phonics knowledge critical to fluent reading with comprehension.

The Phonics to Fluency Connection
Reading fluency reflects the efficiency with which a student is able to read connected text (Perfetti, 1985). Fluent reading is critical because it facilitates reading comprehension by allowing the reader to focus his attention on the author's message rather than on how to say the words (Rasinski, Reutzel, Chard, & Linon-Thompson, 2011). Fundamental to fluent reading is the instant recognition of a large inventory of words by sight, known as automaticity (LaBerge & Samuels, 1974). Automaticity develops through an understanding of the sound-to-letter correspondences in English, which allows the student to leverage, or bootstrap, what they know to quickly learn new words (Share, 1995). Students who are fluent readers with grade-level text by the end of third grade are more likely to have an adequate understanding of letter-sound combinations; this understanding then facilitates the bootstrapping of further word learning. Multiple studies over several decades consistently have found that too many students are not becoming fluent readers, suggesting they are not acquiring the fundamental phonics knowledge that facilitates efficient word and connected-text reading. The studies described below measure fluency in words correct per minute (WCPM). Low scores on this measure mean either the student is decoding too slowly, inaccurately, or both, and can represent the failure of early reading foundational skills programs.

It is important at the outset to make clear that fluent reading in itself does not guarantee comprehension. Disfluent reading, however, nearly always guarantees lack of comprehension, especially so with the

more complex text called for by the Common Core State Standards. Thus, an effective foundational skills program is necessary but not sufficient for reading success.

Evidence Suggesting Poor Phonics Knowledge
The National Assessment of Educational Progress (NAEP) provides a longitudinal record of reading achievement in the United States. Lee (2010) analyzed NAEP by comparing longitudinal data from cohorts of elementary, middle, and secondary readers from the 1970's to similar cohorts in the 1990's and early-2000's. Lee's analysis revealed that fourth-grade readers from early-2000's were merely 3 months ahead of their 1990s cohort, a discouraging finding given the multiple billions of dollars spent on early reading education during the intervening years. Lee also found that middle school students in the early-2000's had made no progress compared to middle school students from the mid-1990's, while secondary students were *12 months* behind their counterparts from the mid-1990's.

Pinnell et al. (1995) and Daane et al. (2005) analyzed the reading fluency of a random sample of fourth-grade students drawn from those taking the NAEP. Using a 4-part rubric to evaluate the quality of oral reading, both studies found that up to 40% of those assessed lacked adequate oral reading fluency. It is possible that the problem actually may be *more severe than reported.*
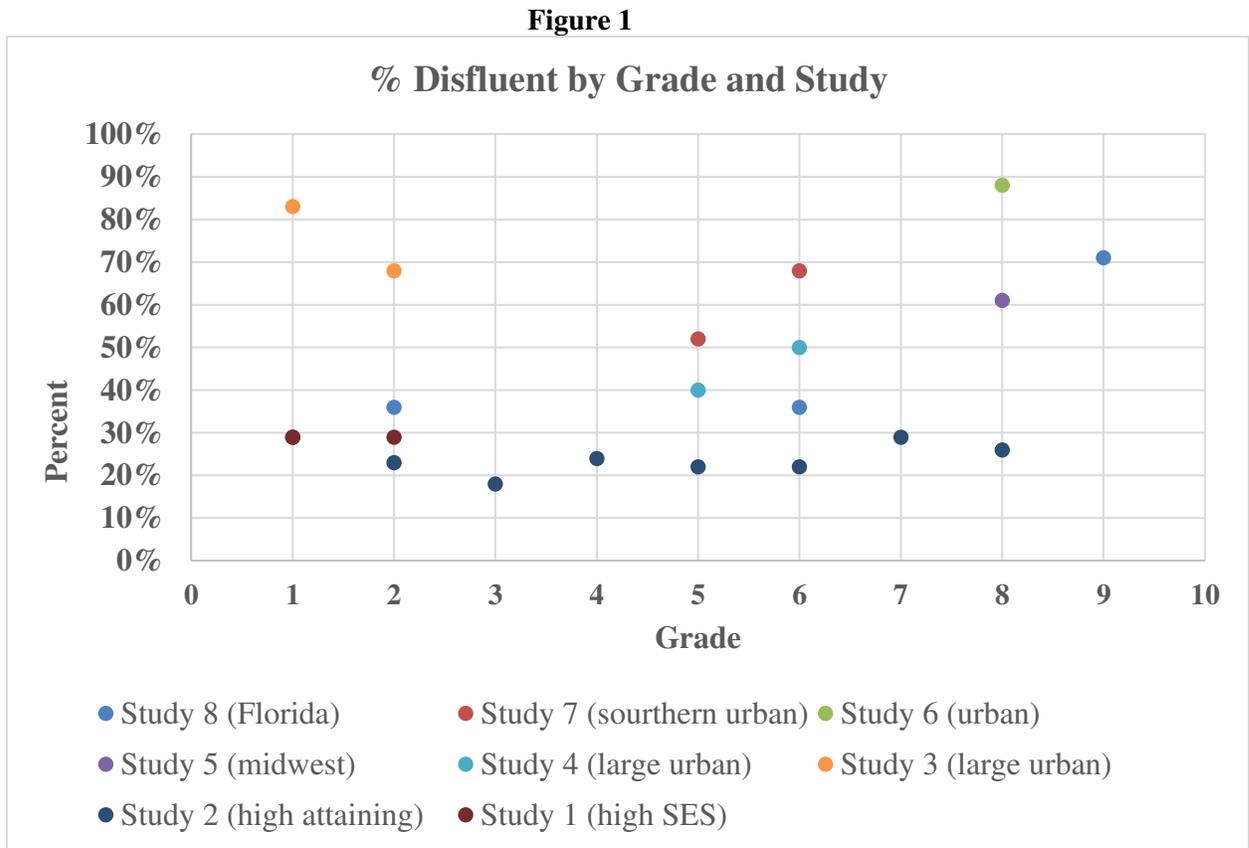Paige & Smith (2016) found that the 4-part rubric used by the authors to evaluate oral reading may not account for important shortcomings in reading fluency. Schatschneider et al. (2004) assessed third-, seventh-, and tenth-grade students taking the Florida FCAT assessment and found disfluent reading in 36% and 32% of third- and seventh grade readers, respectively. Of the tenth-grade students assessed, an alarming 71% were disfluent readers. Paige (2011), studying 227 Tennessee middle school students, found reading fluency attainment ranging between the 17th and 32nd percentiles on a standardized test.

Rasinski and Padak (2005) found that, of ninth-grade students attending a mid-western high school, some 61% exhibited fluent reading at the 25th percentile for *eighth-grade* norms. Paige and Magpuri-Lavell (2011) also studied ninth-grade students attending an urban high school and found average fluency attainment to be at the 16th percentile, again on 8th-grade norms. In a study of 4,439 students attending second through ninth-grade in an east coast district, Paige (2016a) found that approximately 30% to 40% of students displayed less-than-adequate reading fluency. In a study conducted in a high-SES district in a southern state, Paige (2013) found that 30% of the 274 randomly assessed elementary students exhibited less-than-fluent reading. Further, as students progressed across first, second, and third grade, their knowledge of phonics, which began at the 65th percentile at the beginning of first grade, decreased to the 42nd percentile by the end of third grade.

In a study of 4,860 first-, second-, and third-grade students attending a large urban district, Paige (2016b) found that phonics knowledge measured at the 27th, 39th, and 21st percentiles respectively. With such low levels of phonics knowledge demonstrated in third grade, students will likely experience continued difficulty decoding the large number of new words encountered as they progress through school. Commensurate with the demonstrated levels of phonics knowledge, attainment in oral reading

fluency for this same group (as measured by WCPM) was 11, 21, and 28 for first, second, and third graders, respectively. These attainment levels rank between the 15th and 25th percentiles on the Hasbrouck and Tindal (2006) norms. Finally, another large urban district reported to the authors that 23% of third graders, 13% of fourth graders, and 8% of fifth graders were classified as *beginning* readers (D. Liben, personal communication, March 2016).

Figure 1 (below) represents approximately 10,000 students across the reviewed studies that took place in five different states.
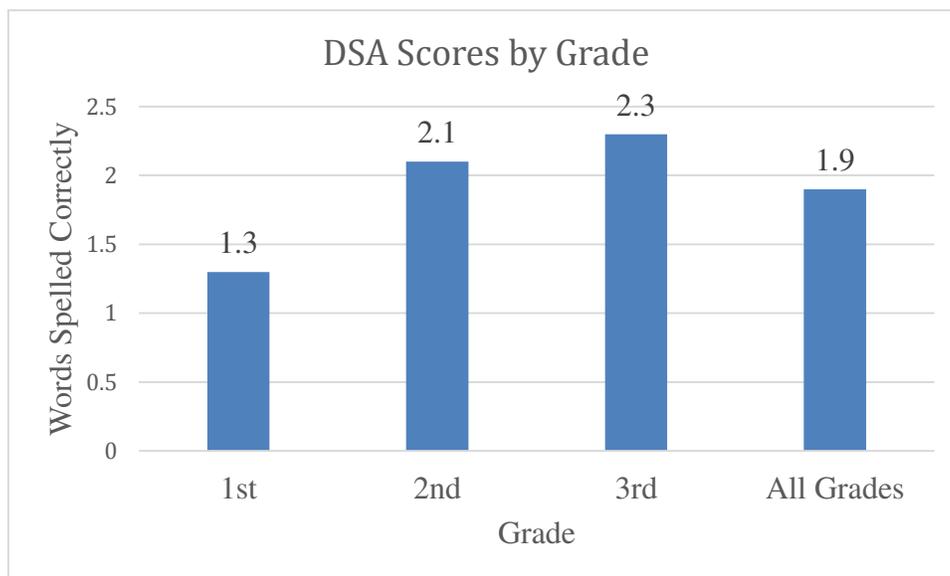
Figure 1

Of all students represented in the graph, fully 40% are disfluent readers. We suggest two conclusions from this analysis of data: 1) the phonics instruction taking place in the classroom is most likely not providing the necessary knowledge that students need to become successful readers; 2) this translates into poor reading fluency, which numerous studies have shown is linked to reading comprehension (Fuchs, Fuchs, Hosp, & Jenkins, 2001; Pinnell et al., 1995; Schatschneider et al., 2004) and academic achievement (Paige, 2011).

Figure 2 (below) represents perhaps the most compelling data suggesting students are receiving inadequate phonics instruction. The Developmental Spelling Assessment (DSA) is a screening inventory consisting of 20 increasingly difficult words that are dictated aloud to students who then write them on

paper (Ganske, 2012). The assessment is designed to determine the student's stage of phonics development. The first stage, Letter Naming, consists of words containing 1) initial and final consonants (*e.g*, m, t, d, f, z), 2) initial consonant blends and digraphs (*e.g*., s, h, th, st, br), 3) short vowels (*e.g*., ack, ick, ock, ang, ing), 4) affricates (*e.g*., dr, tr, ch), and 5) final consonant blends and diagraphs (*e.g*., ck, ch, sh, st). The second stage, Within Word, includes 1) VCe pattern, 2) r-controlled patterns, 3) other common long vowels not covered in the letter naming stage (*e.g*., ai, ay, ee, ea, oa, us, igh), 4) complex consonant patterns (*e.g*. scr, thr, tch, ck, kn, and dge, and qu), and 5) abstract vowel patterns that are neither long nor short nor r-controlled (*e.g*., pout, cow, few, boil, and toy). The DSA has been found to correctly predict a student's stage of development in excess of 90% of the time while test-retest correlations range from .97 to .98 (Ganske, 1999). In other words, this is an excellent assessment built on a long line of research.

Figure 2
DSA Scores by Grade (n = 1,756 (1ˢᵗ), 1,581 (2ⁿᵈ), 1,523 (3ʳᵈ)

DSA scoring awards 1 point for each correctly spelled word. A score of 5 suggests that students are emerging from the letter naming stage while a score of 10 suggests competence with both the letter naming and within word stages. At a minimum, children at the end of third grade should score beyond the letter naming stage (i.e., with a score of 5+) and they ideally should be emerging from the within word stage (i.e., with a score of 9 or 10).

A total of 4,860 students in a large urban district attending first (*n* = 1,756), second (*n* = 1,581), and third grade (*n* = 1,523) were tested in the spring using the DSA. Figure 2 shows that the mean attainment score for all students was 1.9, with first graders scoring 1.3; second graders scoring 2.1, and third graders scoring 2.3. Statistical tests revealed that while second graders out-performed first graders (*p* <

.001), third-grade students did not outperform second-grade students in a statistically significant way (p = .259).

These data are alarming on two fronts. First, students are achieving significantly below what is considered acceptable progress in phonics knowledge as evidenced by scores at the end of third grade that strongly suggesting inadequate phonics knowledge. Secondly, phonics knowledge appears to fossilize after the second grade as no further progress was found between second and third grade. This fossilization of phonics development may be explained by teachers reaching their limit of understanding of how to provide instruction that develops deeper phonics knowledge in their students; it could also be attributed to heavy emphasis on comprehension strategy instruction in the third grade, as well as on test preparation that begins in late winter of the third grade.

From the data presented here, we suggest that part of the observed fluency problem results from a less-than-adequate grounding in phonics. As such, we propose that a structured phonics program provides the best chance for students to learn the letter-sound correspondences that undergird appropriate reading fluency.

Structured Phonics
Structured phonics programs have long been shown to be highly effective in teaching the foundational skills necessary (though not sufficient) for reading comprehension[1] so let's start by clarifying what exactly a structured phonics program entails. Such a program directly teaches the spelling/sound patterns of English in a clear sequence (e.g., beginning with consonant sounds them moving to short vowel sounds, long vowel sounds, consonant blends).

There are many structured phonics programs and the sequence is much the same in all. Students are taught each of the spelling/sound patterns in the sequence and then given an opportunity to apply the sequences as they read and spell words both in and out of context. In other words, students read the words in connected texts and also engage in a variety of activities (such as games, puzzles, and flashcards) outside of the texts they read. Research has shown the need for both of these approaches (Landi et al, 2006).

In most of these programs, the words in the texts are restricted to the spelling/sound patterns that have been taught. For example, if short vowel sounds have been taught but long vowel sounds have not been taught, then only short vowel sounds would appear in the texts students read. Similarly, if specific consonant blends (e.g., bl, cr, tr) have been taught, these would appear in the texts, whereas blends that have not yet been taught would not appear. These texts are often called "phonetically controlled readers" or "decodables" because the majority of the words forming the text conform to the letter-sound or phonetic patterns that have been taught up to that point in the program. Phonetic or letter-sound patterns not yet taught do not appear, or appear far less often, hence the term "phonetically controlled."

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[1] See, for example, https://www.nichd.nih.gov/research/supported/Pages/nrp.aspx

In contrast, programs that do not use phonetically controlled readers might use texts that are controlled essentially by every *other* feature of the text: repetition, context, illustrations, shorter sentences, shorter paragraphs, and larger font. Such texts are usually called "leveled readers" or "leveled texts" (since they are placed into complexity levels by this array of text features) or "predictable texts" (since the array of supports makes what happens very predictable and students use this to help read the words). Typically, guided reading programs use these types of texts.

Another essential feature of structured phonics programs is that they ensure that beginners acquire the foundational skills necessary to move into reading. These programs make sure that children learn both letters and how to segment words into their smallest sounds (phonemes). Learning letters and segmenting words are important contributors in helping children learn to read words during kindergarten and first grade and are the best predictors of reading success (Bryant, Bradley, McLean, & Corssland, 1989). Letter knowledge and sound awareness enable children to interpret letters as representing the separate sounds in individual words and as a result, to remember how to read and spell the words (Adams, 1990).[2] Structured phonics programs usually include the concept of "phonemic awareness," the idea that a word is made up of a series of sounds. Such programs often begin with teaching rhymes followed by letter sounds and parts of words such as syllables. Learning that a word is made up of separate sounds helps set the stage for learning spelling/sound patterns of the language and how they combine to make words. Phonemic awareness is most often taught through games (Adams, 1998) and some programs that are not structured phonics do this as well.

Below, we focus on five issues surrounding structured phonics programs: 1) the types of texts used in structured phonics programs compared to other programs, 2) why a structured phonics approach works so well (hence the overwhelming research), 3) some potential pitfalls in using these programs, 4) how these pitfalls can be avoided, and 5) different approaches that some structured phonics programs have adopted to compensate for these problems..

Texts in Structured Phonics Programs Compared to Texts in Other Foundational Skills Programs
When contrasting the texts students read in structured phonics programs with the texts used in other programs, the key differences are the nature of the text and the different processes students would use to read that text. As noted earlier, leveled readers depend on context, pictures, short sentences, clear patterns, and repetition. They include texts that sometimes are referred to as "predictable texts."

Take, for example, a sample from a Level C text according to Fountas and Pinnell's leveling system. Level C books have a range of possible features, including "more than one sentence pattern repeated in

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[2] Sound awareness is a necessary prerequisite to segmenting words. It is not possible to break up or segment "nest" into four sounds unless there is awareness in general that a word is made up of a sequence of sounds and the sounds themselves do not provide the meaning. The sound that "n" makes has nothing to do with the meaning of "nest"

the same book" and "a few words that are new to children but easy to understand in context" (Fountas & Pinnell, 2017, p.422).

> "Things move in many ways. The top goes around and around." [With accompanying picture of a top and arrows indicating movement.]
>
> "The yo-yo goes down and up." [With accompanying picture of a yo-yo and arrows indicating movement.]
>
> "The people go in and out." [With accompanying picture of people entering or exiting a train, and arrows indicating movement.](Reading A-Z)

These sentences are examples of those found in a mid-to-late kindergarten reader (also known as a leveled reader). Students often read these texts in guided reading after a text introduction with their teacher. The introduction may expose them to words and pictures with which they are not yet familiar, as well as to the syntax or unusual sentence structure of any relevant text. After guided reading, they reread independently or in pairs. Unlike with a text that is controlled for spelling/sound patterns, however, students in this scenario can simply memorize the words and sentences because of the text introduction, or predict because of the pictures and the context. Words like "people," "around," and "things" will not match the scope and sequence of a traditional phonics program for this grade, so students will not be decoding the words. In other words, students can use the pictures, the context, the patterns, or any combination of these to read the words in the text. They do not *have* to focus on the spelling/sound patterns of each or most of the words. This does not mean that teachers cannot call attention to spelling/sound patterns within these words, but that most leveled reading programs do not call for this and it is not essential to reading the text.

This type of approach works well for something called "Concepts of Print"-- the idea that words and sentences are read from left to right; books are read from left to right, and books have titles and pictures. These concepts help support the idea that text and pictures match and that one can problem-solve for an unknown word by using a combination of the sounds and picture cues. However, as texts become more complex (even in these early grades), it becomes progressively more difficult for students to read the words by using this combination of contextual clues. Consider what happens in a slightly higher leveled text when the unknown word is "write" or "teach" and the picture does not show a concrete clue! While it is important to note that students still should be taught to employ context when they read an unfamiliar word, context is an important back-up and should not be the primary process used to read words or to learn to decode words.

Leveled readers for pre-primer or emergent young readers are highly controlled texts, something that is not generally acknowledged or considered. In fact, "controlled text" is a label usually reserved for decodable books, but leveled readers are controlled by repetition, font size, sentence size, sentence patterning, and use of illustrations, predictability and context. Ironically, they are controlled by every feature of text *except* spelling/sound patterns.

By contrast, a phonetically controlled or "decodable" reader would have less repetition, fewer pictures, and be less predictable, since the intent is to ask children to attend carefully to the phonetic patterns they have been learning. Consider the example below (from CKLA Kindergarten Unit 7 Reader[3], which students, when progressing at grade level, would see at roughly the same time of the year as the example above):

> " Pat and Ted had lun**ch** with Meg's tots. Max got ha**sh** on his chin. Wes got ha**sh** on his bib. Tim's milk is on Tom."

This phonetically controlled text requires the student to focus exclusively on the spelling/sound patterns of the words, words made from the spelling/sound patterns that had been taught. Limited pictures are provided, so students must focus first on decoding as their primary word-solving strategy. In this case, the vowel sounds are all short vowels and the consonant blends *sh* and *ch* are bolded to draw attention to this new skill in context. The other words are names familiar to students from past readers, as well as high frequency words previously taught by the program (sometimes called Dolch Words, named after the creator of a list of these types of words). These words are taught as whole words that students commit to memory usually without focusing on the letter-sound pattern. (High frequency words often are also called "sight words," "snap words," "irregular words," "tricky words"--different programs use different labels.)

In sum, the major difference between teaching children to learn to read with leveled texts (or "predictables") vs. phonetically controlled readers (or "decodables") concerns what we are asking students to do with their attention and effort. With leveled readers, we are asking students to predominately use *context* to learn to read; in phonetically controlled readers, we are asking students to first and foremost use the *spelling/sound patterns* of the English language. When using texts that are not decodables, attention should still be paid to spelling/sound patterns -- there is no evidence that students can't use both as long as proper attention is still paid to these patterns..

Pitfalls Preventing Children from Securing a Solid Reading Foundation
Even if a school provides a structured phonics program for its students, there are still common errors made that cause "failure to thrive" conditions for too many children. Some schools now combine a structured phonics program (e.g., "Fundations," "Reading Mastery," and others) with predictable or leveled texts. While this combination is clearly better than no structured phonics at all, it has two potential pitfalls. Time spent on the predictable or leveled readers often means less time attending to spelling/sound patterns. If little or no attention is paid to spelling/sound patterns when students work with the predictable or leveled texts, then students could end up losing the spelling/sound knowledge they have acquired. It also is difficult (though not impossible) to attend to spelling/sound patterns in these texts since the texts are not aligned with the patterns students have learned. In addition, a student may need more work with a specific pattern that does not appear in the predictable text in use.

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[3] CKLA. *Engage NY*. Unit 7 Reader. Retrieved from https://www.engageny.org/resource/kindergarten-ela-skills-unit-7.

There are other critical underpinnings for student reading success that few schools address adequately. As mentioned previously, a major one is reading fluency. In order to read with comprehension, students need to read with fluency. Fluency is defined as reading accurately, at a rate appropriate to the text, and with proper expression (Rasinski, 2004). The first step in fluent reading is to accurately and effortlessly recognize the words in the text; this step is called automaticity. A proficient reader reads about four to five words per second. Students who frequently stumble or hesitate in recognizing words are prevented from reading a text fluently. A structured phonics program, by continually assessing and addressing students' progress in mastering spelling/sound patterns, assures that all students going through the program can decode with automaticity, without which fluent reading is not possible.

To decode with automaticity, students need to learn letters and combinations of letters that represent the 44 different sounds of the English Language in written words. Unfortunately, unlike other languages whose writing systems are far more straightforward since the letters have a one-to-one correspondence to the sounds (e.g., Spanish, Finnish, and Hebrew), in English the same letters can make different sounds: *a* as in bat, date, and all; *ch* as in school and check; *oo* as in look, tool, and poor. And to make matters worse, the same sounds can be represented by different letters or combinations of letters: the short *e* sound in bet and bread; the *f* sound spelled *gh* in laugh, *ph* in phone, or just *f* in fickle (as English itself is!). Ultimately, any word made up of any of these spelling/sound patterns needs to be read accurately and immediately, in roughly a quarter second, and to be spelled accurately as well. (In case you've been wondering, you now know why spelling bees are a uniquely English language event.)

How a Structured Phonics Program Supports Emerging Readers
First, a structured phonics program introduces students to spelling/sound relations separately, explicitly, and gradually. It does *not* (as in the predictable text *Mrs. Wishy Washy* described above) expect students to infer spelling/sound patterns by seeing them in words that they read in context--although contextual exposure can and should be activated to supplement learning spelling/sound relations individually.

In the predictable text, *Mrs. Wishy Washy*, as children see the picture of the broom and the word "broom," the expectation is they would infer that "oo" makes a similar sound and transfer that inference instantly when they see "soon," "spoon," etc. Of course, this does *not* mean that teachers cannot call out this pattern to students. But it does mean that a leveled reading program does not necessarily require or remind teachers to call out letter sound patterns. (Nor, with *Mrs. Wishy Washy*, can one be sure that the same pattern will reappear in the rest of the book, or for that matter, in any books students might encounter in the near future subsequent to *Mrs. Wishy Washy*). Note, too, that students who come from language-rich homes (where they are frequently asked questions or encouraged to look for patterns in language and elsewhere) *would* be more likely to make these inferences in the early grades. This puts students who do not come from such a background at a disadvantage in these vital early years. The famous "30 Million Word Gap" (Hart & Risley, 2003) study attests to this by showing how students from less affluent households learned 30 million words fewer than students from more affluent

households by age three. Students who are spoken to more frequently not only know more words but also become comfortable with more syntactical forms; they also acquire more knowledge. All of this produces a greater comfort with language that is more likely to encourage and inculcate an inferential learning style that would support the more inferential requirements of the leveled or predictable approach.

By contrast, a structured phonics program directly teaches the concept of what a spelling sound pattern is and what it does, thus supporting students who might not have the advantages of students from more educated families. This type of metacognitive awareness has long been shown to support all learning. Teaching such awareness can begin, for example, by asking students what a letter is and by explaining that it is a "picture of a sound." In other words, teaching the concepts of the alphabetic principle and spelling/sound patterns initially and directly helps make students aware of language in general and avoids the risk of losing the forest for the trees as they plunge into one of the most cognitively challenging tasks they ever will encounter. It also helps reduce the disadvantage students coming from less language-rich environments might have in these essential early years.

Second, by introducing spelling/sound patterns in a sequence one at a time, teachers can more easily tell which students have mastered which patterns, and then provide the support to those still in need. If one doesn't introduce, teach, and reinforce the patterns in a clear sequence, then the only alternative is to address problems reactively as they become apparent in texts students are reading. If these texts are like *Mrs. Wishy Washy* – that is, written with no specific spelling/sound patterns in mind – then recognizing and addressing problems becomes far more difficult to do. It also makes it far more difficult (but not impossible) for the teacher to *know* for each specific student which patterns s/he has learned, which students need more support, and how to provide activities to support these students. All this assessment and differentiation would be specified and clear in a structured phonics program. Through frequent and regular check- ins as well as informative assessment of spelling/sound pattern mastery at regular intervals, teachers *and students* would be aware of which spelling/sound patterns have been learned and which need more work.   This awareness is significantly more difficult to achieve (though, again, not impossible) with predictable or leveled texts where students, even those at the same ability or reading level, are reading a variety of different books, none of which were chosen for the inclusion or assessment of specific spelling/sound patterns.

It is important to note an additional advantage that a sturdy knowledge of phonics provides: as students learn an increasing number of spelling/sound patterns, they not only increase their ability to recognize new words containing these known patterns, but they also have a much greater likelihood of recognizing irregular words as well as words with spelling/sound patterns they may not have yet been taught. This occurs due to the increased *comfort, subsequent confidence, and resulting enjoyment with reading in general, but* also happens because all the words they know help provide contextual support for those they don't. This context effect will grow as students continue to learn additional spelling/sound patterns. To whatever degree spelling/sound patterns are mastered, the context effect grows in strength;

conversely, the failure to master spelling/sound patterns diminishes the context effect. Marilyn Adam's hugely influential *Beginning to Read* (1990) lays out the abundant and elegant cognitive science research behind this process. Keith Stanovich and Anne Cunningham's (1998) work illustrates how the failure of this process to move in the right direction contributes to the "Mathew Effect" (Stanovich, 1986) in education: students who start out well move increasingly ahead at a faster rate each year relative to those who start out poorly.

Third, we know that proficient readers know more than just the meaning of a word**.** This insight comes from a body of work called the "Lexical Quality Hypothesis" (Perfetti, 2007). Proficient readers know a word's phonology (how to pronounce it), its orthography (how to spell it), and its morphology (what prefixes, roots, and suffixes make it up). A structured phonics program teaches students all of these features and how to apply the knowledge to decode and spell words. When learners do this a few times for a given pattern, the spellings of individual words become glued in memory to the words' pronunciations and meanings (Reitsma, 1983). This enables students to read the words more quickly from memory the next time they see them and to remember how to write the words. The application of decoding skill to retain individual written words in memory supports the development of proficient readers with automatic word reading skill (Adams, 1990). In other words, after a student first reads "splashing," hears its correct pronunciation, recognizes and reads correctly the "ing" suffix, absorbs its meaning in the specific context, and spells it correctly, s/he then begins the process of placing this word in long-term memory. After a few repetitions, "splashing" is recognized and read with automaticity. It is essential to note that students will vary in how many repetitions they need: some will need *far* more exposures than others. Thus, a good structured phonics program provides abundant materials so teachers can support students who need this greater time and attention while allowing other children who have solid awareness to move on.

Finally, since the teacher knows exactly which spelling/sound patterns currently are being taught and which already have been taught, s/he can select the most appropriate texts for students to read: those that contain the spelling/sound patterns being taught and those already learned. For example, if a student needs more support with consonant blends such as "bl, cr, dr," then working in a book that has these can provide this support. If books are chosen on some other basis (think *Mrs. Wishy Washy*), then this selecting for mastery becomes far more difficult.

A structured phonics programs provide greater, and essential, support for our low-income students

Many students from low-income households face stressors not faced by students from families with more material resources. One impact of these stressors is greater school absences and lateness. A program that frequently and regularly assesses *exactly* which spelling/sound patterns have been mastered and which have not, allows for regular remediation and re-teaching. With such a program, vulnerable students with frequent absences will be more likely to catch up when the teacher has a clear understanding of where they need support.

Second, leveled reading systems privilege inferential learning styles. Students from less educated families (in the US, education levels correlate tightly with income), though obviously just as capable to develop in this area, often come to school with less practice in inferential modes of discourse and frequently less comfort and less diverse language exposure in general (Hart & Risley, 2003).

Third, leveled reading systems count much more on the draw and appeal of the text to pull in students. Since students from less affluent families are less likely to have had the same variety and depth of experiences with literature than their more affluent peers, they may not start school with a pre-existing awareness of the magnetic appeal of reading and literature.

Let the buyer beware - there is a problem with most structured phonics programs currently available in the US Market.
Ultimately, the way students reinforce and commit to memory the large and myriad array of spelling sound patterns is not by simply memorizing rules; rather, it is by seeing the patterns they've learned in words and by working to read and spell the words. This chance to work and learn is present in all structured phonics programs. However, many structured phonics programs have limited the texts that students read so that they are *only* exposed to the spelling/sound patterns they've already been taught.

As many teachers know, these highly controlled texts can be quite stilted, and this is the precise reason many people do not like, and may even refuse to use, structured phonics programs. At the same time, it's important to note that, no matter how dull the text may seem to skilled adult readers, the act of learning to read *any* text successfully (even that on cereal boxes!) is thrilling to novice readers.

Additionally, many teachers and schools moved away from structured phonics programs because they did not see reliable improvement on reading scores after initiating these programs and the programs received the blame. It is critically important to understand structured phonics' place in the equation that adds up to reading success.

A successful structured phonics program is necessary to succeed on any reading test but it is not sufficient. Successful decoding does not always lead to fluent reading. In addition to effortless decoding, fluency requires attention to phrasing, punctuation, and sentence boundaries. Similarly, fluency does not guarantee comprehension, though lack of fluency guarantees lack of comprehension. Once fluent, students still need to grow their vocabulary, grow their knowledge, and have the opportunity to regularly work with rich, complex text.

Successful decoding, however, is the foundation without which none of the rest can stand.

It would of course be *far better* for students to be genuinely engaged with the content of the first texts they read, since that also reinforces the idea that reading is meaningful and valuable for what it can transmit to the reader and not just for the act of doing it.

A Note on Special Education and Response to Intervention (RTI) Legislation

Part of the reason for this legislation was the finding that many of the students who received referrals to special education, especially from less affluent families, were, in fact, students who could not decode with automaticity. Invariably, these students were not taught in a foundational skills program employing systematic phonics. Another benefit of a systematic phonics program, therefore, is to keep students from being unnecessarily labeled and removed from classrooms. Such unnecessary labeling and removal causes these at-risk students to miss interactive read-alouds, research, and other language-rich activities that most grow the vocabulary and knowledge these students need.

The most effective foundational reading programs provide *both* key ingredients: a structured phonics program *and* engaging content-rich texts with instruction that calls attention to and provides repetition of known spelling/sound patterns. Unfortunately, not many programs like this exist, but we will now examine four that do.

Four Specific Structured Phonics Programs That Get it Right

American Reading Company (ARC)
American Reading Company's Independent Reading Level Assessment (IRLA) and Foundational Skills Toolkit combine a number of powerful features:
- A huge number of words that students learn to read as whole words – far more than traditional structured phonics programs provide. Students are gradually directed to pay attention to the spelling/sound patterns within these words as they come up later in the sequence. These words are high-frequency words that appear in many texts (e.g., "on, live, there, little, house, family, mother, come, go, said") and includes far more words than the traditional "Dolch" list mentioned above. ARC calls these "power words." Committing so many words to memory when combined with words representing the spelling/sound patterns learned allows students to work with more engaging texts as they continue to learn more spelling/sound patterns.
- A clear, well-structured, teacher-friendly protocol allowing teachers to assess students' mastery of spelling/sound patterns, vocabulary, and comprehension.
- Highly engaging texts, many of which are the type of nonfiction informational texts students find fascinating (e.g., sharks, insects, spiders, monsters, sports, motorcycles) and that are called for in the new standards. In addition to being engaging, the texts students read contain many words (though not all) with the spelling/sound patterns already learned. This is done in parallel with structured phonics lessons as well as clear and detailed formative assessments to determine what support is needed for each student. Each part of the program reinforces the other.

- Text Sets-- a set of books on the same or similar topics. Text sets help provide a context that enables decoding of new words that might not be in students' vocabulary.

Bookworms

Bookworms is a new K-5 program that includes three highly structured and very clear 45-minute blocks that allow for scheduling flexibility. This program is remarkably straightforward for teachers to learn and implement while giving students everything they need from existing, language-rich trade books:

- A differentiated skills block includes structured phonics with phonetically controlled readers
- A close-reading block employs grade-level trade literature and text-dependent questions mapped to standards; it also reinforces spelling/sound patterns learned in the skills block and works with fluency
- An interactive read-aloud block with full-length trade literature 2 and 3 years above grade level addresses growing knowledge through rich nonfiction and fiction.

Core Knowledge Language Arts (CKLA)

The foundational skills component of Core Knowledge Language Arts (CKLA) takes a different and also powerful approach:
- Though texts in this program are phonetically controlled, they are completely engaging for students of this age because they expose children to other children who are having experiences that might be novel to them. There are stories about families traveling around the world; grandmothers who fly hang gliders; children who discover new fossils.
- These texts are a series of short stories packaged together as a book giving even kindergarten students the sense of reading a "real book."
- Teachers are given an "Assessment and Remediation Guide" that offers many hundreds of activities to reinforce spelling/sound patterns. This guide gives teachers easy access for materials to give to students who need more time and attention to master spelling/sound patterns.
- Here, as in the ARC program, students have the opportunity to reinforce spelling/sound patterns both in lessons and activities growing out of a structured phonics program as well as in the texts they read; each component mutually reinforces the other.

EL Education

EL Education has the following powerful (and, in one case, possibly unique) feature:
- EL Education's structured phonics program solves the engagement problem by using two parallel texts focused on the same topic: a simplified phonetically controlled text for students to read, and a *far* more complex "engagement" text for read aloud (whose words are not phonetically controlled and whose content and language is far richer). At certain points during the read-aloud of the engagement text, the teacher stops reading and students read the same information, but a simplified version in the phonetically controlled text. Thus the read-aloud provides background knowledge and vocabulary, and brings in far more engagement than the

decodable texts could do on their own. This feature makes even the earliest and simplest decodables more engaging for students.

- In the EL structured phonics program, students have the benefit of lessons that introduce and reinforce spelling sound patterns; these spelling/sound patterns are then reinforced in the decodable texts that students read.
- EL puts great emphasis on students setting their own goals based on regular assessments of spelling/sounds. This enhances a deeper understating of spelling/sound patterns as well as students' sense of their own efficacy: a nifty one-two punch.
- In a separate part of EL's comprehensive curriculum (called the "Integrated Literacy" block), students read texts on a specific topic over a number of weeks. Though these texts are not phonetically controlled, support is provided by teachers, pictures, and repetition. That students are reading about a single topic across multiple weeks provides further support, since students are more likely to recognize words directly and indirectly connected to the topic.
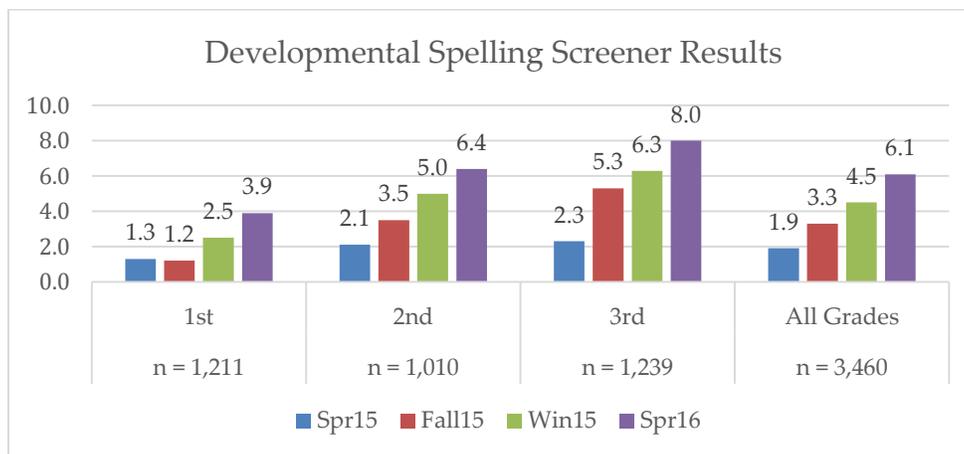
Each of these programs has many other positive components not detailed here. What they have in common, however, and what is most important (in terms of why, despite extensive research, not enough schools include a structured phonics program) is the combination of strong lessons teaching the spelling/sound patterns of the English language, and the opportunity for students to regularly read engaging texts that support these lessons and the essential learning of spelling/sound patterns.

A foundational skills program that blends a strong structured phonics program with meaningful and engaging texts as these do can go a long way in addressing the needs of those students we need to help the most. Such programs can also go a long way in addressing the negative consequences of the Mathew Effect. Sadly, this has not been the norm in American education and is a large part of the reason that achievement gaps persist. Students who fail to decode with automaticity will fail to read with fluency, and students who fail to read with fluency will fail to comprehend the rich complex text needed to succeed in college, work and life. Tragically, the vast majority of these students are those who depend on us the most, and whom we most need to help.

Coda

Over the past three years the second author of this report has been directly involved in a large-district initiative to improve reading outcomes in struggling readers from backgrounds of poverty. Across 45 elementary schools, over 600 kindergarten through third-grade teachers were trained in structured phonics methods for teaching reading. This improvement process initiative has yielded remarkable results. The Developmental Spelling Screener (Ganske, 2014) measures a students' knowledge of sound-to-letter correspondence knowledge through spelling (encoding). This assessment, in combination with the associated feature stage tests, provides powerful insight into what a student understands about decoding words. Using a structured phonics approach, student scores increased across all grades. At the beginning of the initiative third-graders had only basic knowledge of beginning and ending consonant/consonant blend knowledge (2.3). By the spring of 2016, third graders (8.0) now showed knowledge of r-controlled vowel patterns, abstract

vowels, and complex consonant patterns. Across the 3,460 students assessed in this initiative, steady gains can be seen across all grades. Although not shown here, this foundational knowledge of letter-sound correspondences translated into sight-word, pseudo-word, and reading fluency gains. Further, third-grade students who achieved decoding and fluency proficiency levels had a 70% chance of scoring proficient on the state reading sub-test compared to a 20% chance for those who were less-than-proficient.

Developmental Spelling Screener Results

Grade	Spr15	Fall15	Win15	Spr16
1st (n = 1,211)	1.3	1.2	2.5	3.9
2nd (n = 1,010)	2.1	3.5	5.0	6.4
3rd (n = 1,239)	2.3	5.3	6.3	8.0
All Grades (n = 3,460)	1.9	3.3	4.5	6.1

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