

A Guide for Schools Looking to Adopt the Science of Reading

By Peggy Price, M.Ed., F/OGA

Every family, teacher, school administrator, and school board member wants children to thrive in school. We all agree that literacy is the gateway for lifelong learning, access to employment and healthcare, and contributing to one's community. Sadly, approximately one in three (32%) fourth graders in the United States reads at or above a proficient reading level, according to [2022 NAEP data](#). Despite this troubling statistic, low literacy is a problem we can solve.

A decade ago, I left my role as classroom teacher and began working at the Stern Center to help schools and teachers looking to adopt evidence-based literacy instruction. Illiteracy and low literacy are finally getting the national attention they deserve thanks to superb reporting from [Emily Hanford](#), documentaries like [The Right to Read](#), and the hard work of many scientists and activists. We are at a pivotal moment with nationwide discussions about the best way to implement evidence-based literacy instruction.

This article is meant to serve as a guide for schools that are eager to embrace the Science of Reading. First, let's define the Science of Reading (SoR) and dispel a few myths. This term refers to "a vast, interdisciplinary body of scientifically based research about reading... and writing" (The Reading League, 2022, p.6). The SoR is more than systematic phonemic awareness and phonics instruction, although both are necessary components of beginning literacy instruction and instruction for those who struggle to learn how to read, according to the National Reading Panel (McCardle & Chhabra, 2004). The SoR is not a set curriculum or program.

However, I worry about a troubling trend in which many schools, desperate to help students and improve literacy scores, are searching to purchase a program that claims to be based on SoR, Orton-Gillingham (OG), or Structured Literacy (SL) without scrutinizing it. Buyer beware: There is no consumer protection agency for educational materials. For brevity, this article will focus on foundational reading and spelling skills. It will not address other essential elements of the English Language Arts curriculum, including written expression, knowledge building, reading comprehension, and vocabulary.

Purchasing a new curriculum or program is insufficient. Curriculum materials do not solve issues with scheduling, staffing, and a lack of background knowledge about the SoR. Just like a doctor or nurse using a new blood pressure instrument, they must understand the basics of human anatomy. Therefore, teachers need to understand the structure of the English language and how to teach it explicitly and sequentially with adequate practice and progress monitoring to

ensure mastery. Without this essential background knowledge and ongoing deliberate practice coupled with coaching (Kissau, 2018), adopting new programs is unfair to teachers and their students.

Not all phonics, OG, or SL programs are created equally. The heart of any good OG or foundational literacy program is its scope and sequence (S&S). "Scope refers to the breadth and depth of content and skills to be covered. Sequence refers to how these skills and content are ordered and presented to learners over time" (UNESCO, 2023). An effective S&S should teach foundational literacy skills from simple to complex, common to less common, and more predictive and reliable to less predictive and reliable. These are part of our core OG principles. Below are a few questions you can ask when looking through a program's S&S:

1. **Who is this program designed for**—beginner readers, such as K-2 students, or older struggling readers?
2. **Is phonemic awareness (PA) instruction part of this program?** If not, the school will need to adopt a supplemental PA program. It is important to look at how PA is taught, including practice with phoneme deletion and substitution as developmentally appropriate. PA instruction should advance beyond phoneme blending and segmenting (Ashby, et al., 2023).
3. **Is the S&S developmentally appropriate?** Examine the pacing and content to ensure it is appropriate for the students' age and grade level. For example, one district recently decided to stop using a phonics program that taught five letter-sounds each week in kindergarten. By December, all the basic letter-sounds from A-Z had been introduced, but teachers rightfully complained that their students were not given adequate time to master basic letter-sound correspondence and, just as important, learn how to write letters accurately and legibly.
4. **How are consonant blends taught?** Consonant blends refer to two or more consonants side by side that retain their sounds, as in *crab*, *lump*, *scrap*. Unlike consonant digraphs (e.g., sh = /sh/), consonant blends are not a new letter-sound correspondence to learn. Words with consonant blends require learners to segment and manipulate words with four and eventually five sounds (e.g., crab = /k/ /r/ /a/ /b/, blast = /b/ /l/ /a/ /s/ /t/). Therefore, teaching one–two consonant blends in isolation is counterproductive. Instead, ensuring students have the prerequisite PA skills will allow them to make quicker progress in reading and spelling words with

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consonant blends. How a program teaches consonant blends reveals the curriculum developers' understanding of how phonemic awareness and phonics impact reading development.

5. **Does the S&S order skills from simple to complex, common to less common, and more predictive and reliable to less predictive and reliable?** For example, I would not recommend teaching the digraph 'ch' after y as a vowel as one program listed. Understanding that 'y' says /I/ as in *my* at the end of a one-syllable word and /E/ as in *candy* at the end of a multisyllabic word is more complex than learning ch = /ch/ as in *chin, chat, such*.
6. **Are syllable types explicitly taught?** Several phonics programs ask children to memorize many different letter-sound patterns (e.g., sh = /sh/, igh = /I/, ur = /er/) but never teach students the most fundamental facts about the structure of the English language. If we teach students to look at what comes after the vowel to determine the vowel sound (syllable types), students will understand the six (or seven if you separate diphthongs from vowel teams) categories of syllable types. Students and their teachers often say that learning syllable types demystifies how many words are read and spelled. In addition to syllable types, the OG Approach systematically teaches syllable division (how to divide multisyllabic words), spelling patterns, word parts (prefixes, suffixes, and roots), and more that are thoughtfully interwoven within the S&S from simple to complex as listed in #5.
7. **Does the program predominantly teach decoding or word analogy?** Teaching decoding over word analogy has several advantages to build accurate and efficient word recognition. I strongly recommend listening to Dr. Katharine Pace Miles's recent March 24, 2023, OGA conference keynote address, in which she explains why teaching decoding (using letter-sounds, syllable types, and morphemes to decode a word as we do in the OG Approach) is superior to the analogy approach of learning -ump in order to read the words *jump, dump, lump* (Byrne, 2005; Ehri, 2014; Miles & Ehri, 2019). You can watch a similar lecture with Dr. Pace Miles on this topic [here](#) (with special attention to 5:30 – 19:00).

I learned the importance of being a critical consumer when I researched one program which touted itself as being based on SoR and cited many leading researchers. I was impressed! However, upon closer inspection,

the program heavily relies on an analogy approach to teach beginning readers, which Dr. Linnea Ehri (2014), psychologist and leading expert on the development of reading, explained is not as effective until the reader progresses to the consolidated alphabetic phase. For example, in first grade, this program's S&S taught -en words, including the words *ten, trench, open*. The word *ten* (three sounds) is far simpler to decode than the word *trench* (five sounds, including 'tr', which is affricated), and *open* (two-syllable V/CV word). The next skill taught in this S&S was -ame words, such as *game*.

Lastly, teachers who have a deep understanding of the English language can adapt materials to suit their students' needs. Even if a program is not perfect, its decodable texts or activity books may be quite helpful to classroom teachers who need materials for independent work, center time, and many other activities during the school day beyond a whole class or small group OG lesson. Most programs post their S&S and example lesson plans on their website and are happy to meet with schools and share more materials for your review.

If a school or district is looking to purchase a program or build a robust library of resources, ensure the purchasing team has a deep understanding of the SoR and OG principles. If not, consider consulting with an OG Fellow or someone with comparable knowledge in the field. At the Stern Center's Orton-Gillingham Institute, we have helped districts review programs before they spent taxpayer dollars, built a library of commercial materials for teachers to use flexibly, and provided them with a detailed S&S for general education and a S&S for intervention purposes. One district we work closely with has created an expansive in-house collection of teacher-made materials to share among their staff.

Here are my top five tips for schools:

1. Maintain a healthy dose of skepticism. Look beyond the buzzwords of SoR, OG, or SL.
2. Invest in high-quality curriculum materials and long-lasting teacher training that combines both coursework and job-embedded coaching. In-depth coaching is the cornerstone of the OGA training model. Without successfully completing a supervised OG practicum, one cannot claim to be trained in OG.

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3. Have realistic expectations and stay positive! Ongoing teacher support coupled with high expectations and accountability from school leadership is key.
4. Don't let perfection be the enemy of the good. If you like a program's decodable text series or activity books but don't like their S&S, consider purchasing the books as supplemental materials.
5. Often lasting change is slow and can start small. Schools may choose to support the early adopters who want to

learn the OG Approach and complete an OG practicum before implementing a school or district-wide initiative.

Teachers *do* need high-quality curriculum materials. They also deserve high-quality teacher training, which includes job-embedded coaching (i.e., the OGA practicum). Every child has the right to read and write, and every teacher deserves the knowledge and training to realize that promise. 🌱

[What is Orton-Gillingham?](#)

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