# The Science of Reading: 5 Steps to Literacy Success for All Students

By Dr. Ana Gabriela Bell Jiménez

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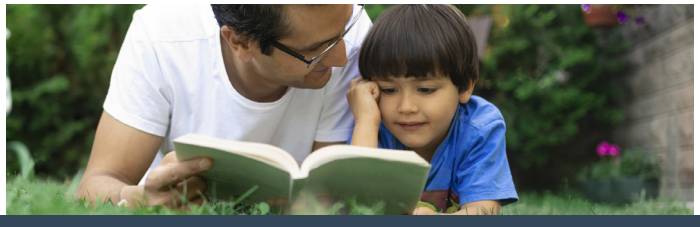
I'm a native Costa Rican who moved to the United States as a foreign exchange student when I was 20. I know what it feels like to learn a second language—to be an English language learner (ELL), and to be biliterate. That's why I focus my work on literacy for English language learners and other historically marginalized populations.

When I started out as a high school English language arts teacher here two decades ago, I came to a realization that shapes what I do today. Despite the fact that I hold multiple licenses, passed all the interviews, completed my academic preparation, and could read and write in two languages, I didn't know how to teach literacy in English. I didn't have all of the tools I needed to help my students succeed. It was a vulnerable moment in my career, but one that helped me begin to engage in more meaningful, transformational practice.

While there's a huge body of research—referred to as "the science of reading"—that can guide educators on how to teach literacy effectively and improve outcomes, many educators aren't aware of it, nor can they easily access it. In this article, I'll share with you five steps you can take to improve literacy outcomes for your students, guided by the science of reading.



## 5 Steps to Literacy Success for All Students

### 1. Verbalize Your Vision

The first step in helping your students become skilled readers is to create and verbalize your vision. This means considering your background and experiences, and then naming your desired literacy outcome. While a vision for instruction can exist at a systems level, it's important that we as educators verbalize our own vision and commitment to these academic outcomes because we have such a powerful impact on students.

For example, at Madison Metropolitan School District, our vision is: "Every school will be a thriving school that prepares every student to graduate, ready for college, career and community." This is how we articulate our belief system. Based on this, I created my personal vision that every student, regardless of ethnicity, language or socioeconomic status, will graduate college and career ready.

### 2. Create Your Goal

Once you've articulated your vision, it's time to define your goal. Break down your vision into specific questions and use data to find the answers. In my example, I needed to find out who my students are and the meaning of "ready for college, career, and community." To find the answers, I turned to the data. Because 27 percent of our district is English language

learners, I had to factor those students into my goals. I also needed to concentrate on African-American students and students with disabilities.

Next, I had to define college and career ready. For me, it means that every single student has access to grade-level text. Finally, I attached metrics to that goal. I analyzed how many of these English language learners, African-American students, and students with disabilities were currently meeting my vision and goal, and backward-mapped to determine how much work I had left to do.

**3. Align Instructional Practices with Research (The Science of Reading)**

Now that you've created your goals, you'll need to take a look at your practice to see how effective you've been with your instruction. At this point in my journey, I again looked at my data. I wanted to find out how my specific groups of students were performing. By conducting this analysis, I came to the conclusion that my instructional efforts were not translating into academic achievement. I needed to find out how my instructional practices lined up with the research to help me achieve my goals. That's how I discovered the science of reading.

According to Dr. Louisa Moats, the science of reading can be explained in the following way:

> "The body of work referred to as the 'science of reading' is not an ideology, a philosophy, a political agenda, a one-size-fits-all approach, a program of instruction, nor a specific component of instruction. It is the emerging consensus from many related disciplines, based on literally thousands of studies, supported by hundreds of millions of research dollars, conducted worldwide in many languages. These studies have revealed a great deal about how we learn to read, what goes wrong when students don't learn, and what kind of instruction is most likely to work the best for the most students."

Having a solid understanding of the science of reading is fundamental to adjusting and improving your pedagogical practice. This body of research can be more fully explained by looking at some key theoretical frameworks.

***The Simple View of Reading***

The Simple View of Reading (Gough & Tunmer 1986) states that reading comprehension incorporates two connected processes:

- Word recognition or decoding
- Language comprehension

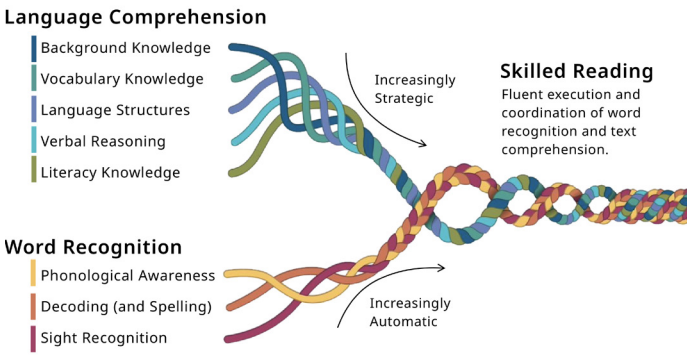
**The Simple View of Reading** (Gough and Tunmer, 1986)

Word Recognition x Language Comprehension = Reading Comprehension

The framework states that you can't achieve reading comprehension unless you can decode and comprehend text. But what does this really mean?

***The Reading Rope***

We can break down the components of The Simple View of Reading further by looking at the Reading Rope (Scarborough 2001).

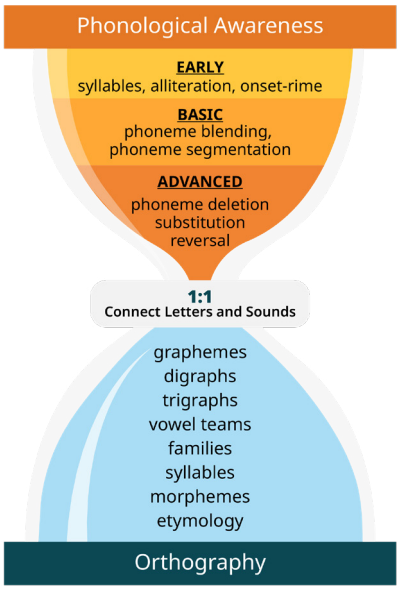



This framework explains the elements that make up both language comprehension and word recognition. It states that language comprehension is made up of background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge.

The other strand of the rope—word recognition— consists of phonological awareness, decoding, and sight recognition. Skilled reading is the result of mastering these two areas.

### *Tolman Hourglass Figure*

For each of the strands within the reading rope above, we can go even a little bit deeper. For example, if you wanted to learn more about how phonological awareness relates to orthography, you could consult the Tolman Hourglass Figure. This quantifies and explains how phonological awareness is a skillset that moves from early, basic, and advanced all the way to the alphabetic principle, morphology, and orthography.




Courtesy of Dr. Carol Tolman

All of these are important as theoretical frameworks, but they carry a great amount of weight for each of us on an emotional, psychological, and even physical level.

**4. Align Instructional Resources and Platforms**

Once you've aligned your instructional practices with the science of reading, you should do the same for your instructional materials and platforms. For instructional resources, that means looking at the linguistic structures of your grade-level text and ensuring that those resources are rigorous and align with standards.

Think about the tools you're using and how you're using them, including assessments, interviews, and observations. You'll need to be sure your instructional resources line up with your research-aligned practices, so you can keep moving closer to your student achievement goals.

**5. Collect and Analyze Data**

In order to track student progress, it's important to collect data from universal screeners. This data should cover the aspects included in the Simple View of Reading framework (word recognition and language comprehension). For example, in the first 10 days of school for kindergarten through second grade, you must know where each student is in relation to word recognition and fundamental awareness. Using this data, you can then plan your instruction.

You should also make sure you're using interim data along the way, perhaps every quarter or trimester, so you can see how students are doing in these areas at any given time. You should never be surprised when it comes to student performance, because you have access to data at every step that allows you to shift your practice in response to student needs.

## Working Together for Stronger Readers

Teaching our students to become skilled readers is a complex process, and it's one we can't navigate alone. As educators, we do the best we can to help our students achieve using the knowledge we have. By collaborating with our colleagues and exploring the science of reading, we can better understand how students learn to read and what we can do to help them. And in knowing, we have the potential to do more than we ever dreamed for our students.