



# 1

## **MODULE 1: DEFINING AND DESCRIBING A COMPLEX SKILL**

### **INCLUDES THE FOLLOWING TOPICS:**

- Reading is a complex activity that includes the skill of fluency.
- Reading fluency can be defined as a multifaceted skill that includes the components of accuracy, rate, and prosody.
- A complex array of mechanics (reading skills) contributes to reading fluency.
- Fluency plays an important role in overall reading success.
- Various brain processes contribute to reading fluently.
- The role of fluency changes as students develop as readers.
- Understanding reading fluency research can inform practice.



# MODULE 1: DEFINING AND DESCRIBING A COMPLEX SKILL

## INTRODUCTION

Reading can be a pleasure and a life-changing gift, and for many lucky people, this is their personal experience with the act of reading. For these fortunate individuals, learning to read was effortless and uneventful, or perhaps remembered as an exciting, memorable period in their lives. Many individuals experience reading as a treasured way to peek into the lives of fascinating people—real or fantasy—delving into the ancient past, current times, or the amazing future. Reading is a way to pleurably pass time, to learn new and important skills or information, to expand dreams or enhance day-to-day reality.

*Our schools are filled with students who struggle with reading. Some estimate the percentage may be as high as 20-25 percent of all students, and even higher—from 60-70 percent—for African American, Hispanic, limited English speakers, and poor children.*

Unfortunately, even tragically, for millions of other people, reading is not a positive experience. In fact, reading is quite the opposite. For far too many students, the process of learning to read may seem tedious, painful, and even humiliating. Many children, adolescents, and adults, experience the act of reading (or trying to read) as a lifelong challenge that brings *no* pleasure and offers *no* benefits. Reading is hard work, time-consuming, and meaningless, resulting in no value or purpose.

Our schools, from elementary through high school and beyond, are filled with students who struggle with reading. Some estimate the percentage may be as high as 20-25 percent of all students, and even higher—from 60-70 percent—for African American, Hispanic, limited English speakers, and poor children. Many among the unemployed or underemployed, and many who are serving prison terms, also struggle with the process of reading (Baer, Kutner, & Sabatini, 2009).

The experience of reading doesn't have to be this way. Compelling evidence from a convergence of current reading research indicates that somewhere between 90-95 percent of all students can achieve literacy skills at or approaching grade level (cf., Al Otailba, Connor, Foorman, Schatschneider, Greulich, & Sidler, 2009; Moats, 2011, Rashotte, MacPhee, & Torgeson, 2001). This means that the vast majority of our students can learn to read and join the ranks of the "lucky" folks who both enjoy and benefit from reading.

We need to ask ourselves: What is preventing this kind of success with our students? Why isn't this happening in every school today? What causes reading to be an effortless joy to some, yet a painful burden for others? What specific skills do professional educators need to understand, assess, and teach to ensure reading success for every student?

The purpose of these modules is to help teachers, specialists, and others with related interests develop an effective and useful set of knowledge, skills, and strategies to address a key aspect of successful reading—fluency. We begin here in Module 1 by defining reading fluency, expanding knowledge about the many skills it takes to read fluently, and exploring reading fluency's relationship to the overall complex task of reading.

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Module 2 addresses how to assess reading fluency efficiently and effectively, and how to use assessment data of accuracy and rate to: (a) identify students who might need assistance with this essential skill, (b) determine which specific aspects of fluency should be targeted for instruction and intervention, and (c) evaluate whether or not our applied instruction is effective. Finally, in Modules 3 and 4, we look at how professional educators use their understanding of fluency, along with assessment data, to design and deliver appropriate and effective instruction and intervention to help every student become a fluent, successful, and motivated reader.

## LEARNING TO READ

Learning to read is like constructing a structure with blocks. Investing sufficient time and effort to build a firm foundation helps to ensure that the remainder of the building has sufficient support. Reading is a highly complex task involving many interconnected and codependent linguistic processes that draw upon a variety of separate skills (Mehta, Foorman, Branum-Martin, & Taylor, 2005). Fluent readers have established a firm foundation for reading by integrating the various component skills so well that the act of reading occurs without the reader having to intentionally will the skills into action (Hudson, Pullen, Lane, & Torgesen 2009). When these various skills are fully established, reading happens automatically.

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Marilyn Adams (1990) compared this complex process to driving a car. According to Adams, there are many discrete systems that a driver must learn to engage and implement simultaneously. However, as Adams pointed out, drivers only drive the car whereas readers also need to *build* their car (develop the mechanical systems for identifying words) and *maintain* the car (fuel it with print, repair any problems along the way, and make sure it runs smoothly) before finally being able to drive the car successfully. This multiplicity of tasks requires drivers to be motivated, strategic, and mindful of the route they are taking.

Adams also noted that while cars are built by assembling various parts separately and then fastening them together, the parts of the reading system are not so distinct. We don't become readers by learning each individual subsystem and then connecting them together, piece by piece. Rather, the parts of the reading system must both develop together *and* be processed together effortlessly for skillful reading to occur. One of the key components of this complex process is *reading fluency*.

### *Quick Response:*

- Does Adam's analogy make sense to you?
- Can you think of a different way to describe the multifaceted skill of reading?
- Do any questions arise?

## DEFINING READING FLUENCY—COMPONENTS AND MECHANICS

What is reading fluency? Many questions surround the definition of fluency as a concept, in part because fluency has many subtle *mechanics* that are interdependent and therefore difficult to separate (Hudson et al., 2009; Kuhn, Schwanenflugel, & Meisinger, 2010). These *mechanics*, or skills, work together to enable fluent reading. Although professionals may not hold to firm consensus regarding a single definition of reading fluency, most definitions include three observable, measurable *components*: accuracy, rate, and prosody (commonly referred to as expression). We will discuss these three components and then elaborate how various mechanics involved in each component make fluent reading possible.

For our purpose in these modules, we define fluency as:

Reasonably *accurate* reading, at an *appropriate* rate, with *suitable* prosody, that leads to accurate and deep comprehension and motivation to read.

Within our definition, there are some specific technical terms that can be precisely defined (accuracy, rate, prosody), while other words used to describe the performance standards for each component are intentionally left ambiguous (*reasonably* accurate, *appropriate* rate, *suitable* prosody). Below we will describe each of the three components of our definition and then relate the components to their less-distinct performance standards. These components are illustrated in *Figure 1.1 Components and Mechanics of Fluency*.

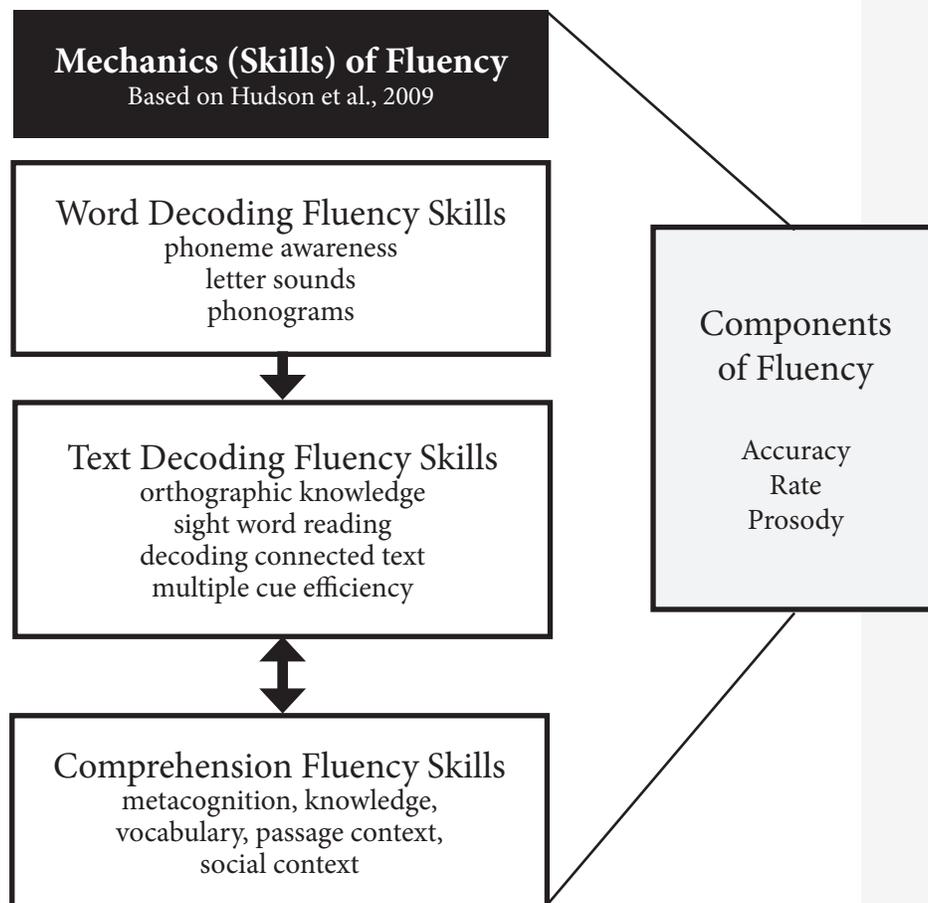


Figure 1.1 Components and Mechanics of Fluency

### Component #1- Accuracy

In our definition of reading fluency, the first component listed is *accuracy*. We listed accuracy first to underscore its crucial role as the essential foundation of reading fluency. To be considered a fluent reader, reading must be accurate *first, foremost, and forever!*

The ultimate purpose of reading is always to comprehend what is being read. In order for a reader to understand what a text means, that text first must be read with a certain level of accuracy, meaning that accurate word meanings must be accessed. This may sound simplistic. However, to read *text* accurately a reader must be able to identify individual *words* accurately, which requires learning the alphabetic principle: that *letters* (graphemes) have associated *sounds* (phonemes) that need to be accurately identified and skillfully processed. Irregular words that cannot be decoded must also be read accurately. The recognition of *common letter patterns* as well the *correct spellings* of words also play roles in text accuracy. Then, of course, once the word has been identified, its correct meaning must be accessed. For a truly fluent reader, the accuracy of word identification and meaning happen simultaneously and automatically.

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### Component #2- Rate

Rate is often mistakenly used as a synonym for fluency. However, rate technically refers only to the *speed* with which students read text. Fluency is far more complex than rate alone. Another common fallacy about rate is that “faster is better,” although most teachers likely know from experience that this is not true. Most teachers have had experiences with students who read quickly but still may not have good comprehension. Speed alone does not facilitate comprehension, and a fast reader is not necessarily a fluent reader. In fact, fast readers may be reading inaccurately or reading too quickly to think about what they are reading. The rate or speed at which text is decoded and recognized represents an important aspect of fluency. *However, reading fast is not the same as reading fluently!*

### Component #3 - Prosody

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Prosody is the technical term for what most teachers and parents refer to as “good expression.” Prosody includes the pitch, tone, volume, emphasis, and rhythm in speech or oral reading. Another aspect of prosody is a skillful reader’s ability to “chunk” words together into appropriate phrases (Schreiber, 1991).

There is only minimal evidence that prosodic reading influences or mediates reading comprehension (Schwanenflugel et al., 2004). One study, however, found that the extent to which students use correct expression while reading orally can indicate how well they comprehend the text being read (Hudson, Lane, & Pullen, 2005).

Three researchers in this field, Kuhn, Schwanenflugel, and Meisinger (2010), state that they believe “rather conclusively at this point that good reading prosody emerges as children develop efficient word and text oral reading skills” (p 45). In other words, prosody may be an outcome, rather than a contributor, to comprehension.

Tim Rasinski (2004) used the analogy of a musician when he discussed the role of prosody in fluent reading. He noted that skillful (fluent) musicians interpret a musical score through their decisions about pacing, phrasing, emphasis, and variations on how to adjust the volume and tone of the piece as they play it. They must first be able to simply “decode” the music notation score accurately, then they construe how to present the piece using their understanding of the music, guided by suggestions of the composer regarding accents, dynamics, etc. Similarly, readers who demonstrate suitable prosody indicate reading fluency by moving beyond mere decoding into expression that likely reflects comprehension.

### *Reasonable? Appropriate? Suitable?*

Now let’s look at the performance standards associated with each component in our definition of reading fluency. Our definition states that fluency is comprised of *reasonably* accurate reading, at an *appropriate* rate, with *suitable* prosody. We understand that the italicized terms are rather vague, and they imply that standards for accuracy, rate, and prosody may actually change from time to time or in different situations. Exactly our point!

Before we explain, we need to share a bit of our educational philosophy and professional ethics. We hold ourselves to the following standard for our work as educators: Whenever we need to make decisions in our professional practice with students, we first seek whatever guidance can be obtained from a convergence of well-conducted, relevant research. However, if compelling empirical information is not available, then we rely on common sense to form professional judgments, based on years of field-based experience in classroom settings.

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While the importance of reading accuracy, rate, and prosody have been well documented in research, when we consider making recommendations regarding the *performance standards* for these components, we must combine findings from research with practical, common sense experience. Using this blend of science and practice, we conclude, along with most educators, that the performance standards for these three components of fluency should vary depending upon the demands of the task.

For example, if we are reading the directions on a bottle of medication that must be administered to save the life of a loved one, we certainly need to read as accurately as possible! We would strive to be 100 percent accurate. We are likely going to slow down and even reread the directions more than once. If there is a word used in the directions that we do not understand, we will consult expertise. Similarly, if we are studying some challenging material for an important exam, again we will want our accuracy to be as high as possible, and therefore our rate will likely be slower than when comprehension requirements are less demanding.

On the other hand, if we are simply skimming through a favorite magazine to pass the time or perusing the newspaper on a Sunday morning, our accuracy levels can be significantly lower, so our reading rate may be

higher than optimal levels. By the same token, in some situation readers' prosody might be appropriately exaggerated if they are reading a humorous piece of literature aloud to an audience or a group of friends. Clearly, different situations demand different emphases of the three components of fluency. Below we explain our thoughts about performance standards for fluent reading that involve *reasonably* accurate reading, at an *appropriate* rate, with *suitable* prosody.

### *“Reasonably” Accurate*

How accurate should we expect our students to be? What is “reasonable”? Precisely defined standards for reading accuracy have not been scientifically established. In their summary of research on reading fluency, Rasinski, Reutzel, Chard, & Thompson (2011) state that readers' comprehension appears to degrade when the percentage of accurately read words falls below 95 percent, thus implying that we should aim for *at least 95 percent accuracy* as one indicator of fluent reading with students. When students' accuracy rates fall below 95 percent, additional diagnostic assessment may reveal underlying causes for the errors being made and provide guidance for instruction to help improve reading accuracy. Research suggests that for younger emerging readers, acceptable levels for accuracy should be even higher (perhaps 97 to 98 percent) in monitored instruction or practice settings (Foorman, Francis, Shaywitz, & Fletcher, 1997).

*When students' accuracy rates fall below 95 percent, additional diagnostic assessment may reveal underlying causes for the errors being made and provide guidance for instruction to help improve reading accuracy.*

Current research on acceptable accuracy rates is minimal; however, it is generally accepted that an accuracy score of 95 percent or better is desirable. When accuracy dips below 95 percent performance on reading tasks, reading comprehension suffers (U.S. Department of Education, 2003). Current studies are seeking to identify desirable accuracy levels for each grade level (first through sixth grade) based on CBM-R reading passages. Until we have access to the outcomes of this research, it is recommended that teachers note when students' accuracy levels fall below 95 percent (even those students whose wcpm ORF score is acceptable) and respond with individual attention through further diagnostic assessment and instruction. Poor accuracy leads to compromised comprehension and requires teacher attention to repair.

### *“Appropriate” Rate*

Norms for oral reading fluency (ORF) as measured in words correct per minute (wcpm), have been established (Hasbrouck & Tindal, 2006). Note: Detailed information will be provided in Module 2 about ORF assessments. Researchers generally agree that performance at the 50th percentile of these ORF norms can serve as a reasonable benchmark for determining an appropriate reading rate. Unfortunately, some states and districts across the country have used these norms to set their standards for reading fluency at the 75th percentile or even higher!

Setting high standards for students is usually a very good thing to do. In many areas, higher or bigger is better! For example, having a higher I.Q. or being able to run, jump, or swim faster, higher, or longer is certainly better than lower scores in these areas. However, in the case of oral reading fluency, this notion is not correct. There is absolutely *no* research or evidence from real-world practice to support that reading *faster* is better. While there is ample empirical evidence that it is important for students to maintain wcpm rates minimally at

the 50th percentile, there is no research to suggest that pushing students to have wcpm scores above the 50th percentile results in any long-term benefit. Very few students will be able to achieve such levels, so they and their teachers may become frustrated in the attempt. More importantly, there is no reason to believe that students’ reading success or enjoyment will substantially benefit if they do achieve this higher level. In other words, students do not need to read as fast as possible to become good readers. Students who read in the average range of ORF norms are on target to become effective readers, so they are doing just fine. *Fast reading is not the same as fluent reading!*

*Like blood pressure, body temperature, and cholesterol, ORF scores can serve as “indicators” of health and wellness, and scores at the “average” level are, in fact, optimal.*

It is preferable and more accurate to think about ORF scores like we think about blood pressure, body temperature, or cholesterol levels. All three of these measures have established “norms,” and there are significant findings from medical research to indicate that it is important for healthy people to maintain their blood pressure, body temperature, and cholesterol at “average” or expected normative levels. Unlike I.Q. or athletic prowess, there is absolutely *no* benefit to having significantly higher (or lower) scores in these three areas! Like blood pressure, body temperature, and cholesterol, ORF scores can serve as “indicators” of health and wellness, and scores at the “average” level are, in fact, optimal. As professional educators, we need to understand this correlation and challenge those who promote the incorrect notion that we should push students to read ever faster. How to correctly obtain and interpret ORF words correct per minute scores will be fully explained in Module 2.

### “Suitable” Prosody

As with the other two components, there is no “one size fits all” for measuring optimal prosody. There are times when, especially reading silently, expression is of little or no help to our understanding and enjoyment of the text. In silent reading, we simply want a reader to understand and attend to the diacritical markings of periods, commas, exclamation points, and quotation marks provided by the author to assist in the text interpretation. In oral reading, prosody is more evident. When oral reading sounds as effortless as speech, and mirrors the melodic features of spoken language, we can say that the reader is using *suitable* prosody (Rasinski, 2004; Stahl & Kuhn, 2002). However, there may also be times when exaggerated prosody would be quite suitable. In theatrical performances or other entertainment venues, a reader might embellish a presentation with variations of pitch, intonation, phrasing, and pauses that would certainly not sound like normal speech but might be entirely appropriate for that occasion.

Now, please complete the following Quick Response to self-check what you have learned about the components of fluency. Then we will dig a little deeper into the mechanics (or skills) that enable fluent reading and that form a basis for assessment and instructional decisions.

#### *Quick Response:*

- Identify the three key components in the definition of fluency and describe how each contributes to the overall skill.
- What does “reasonable,” “appropriate,” and “suitable” mean to you as a teacher when you think about teaching students to be fluent readers?