JOHN J. PIKULSKI
DAVID J. CHARD

Fluency: Bridge between decoding and reading comprehension

As part of a developmental process of building decoding skills, fluency can form a bridge to reading comprehension.

Fluency, which has been referred to as a "neglected" aspect of reading by the National Reading Panel (National Institute of Child Health and Human Development [NICHD], 2000), currently is receiving substantial attention from researchers and practitioners. This may be because NICHD's influential *Report of the National Reading Panel* identified fluency as one of only five critical components of reading.

Fluency has sometimes been viewed as essentially an oral reading phenomenon. The National Reading Panel defined reading fluency as "the ability to read text quickly, accurately, and with proper expression" (NICHD, 2000, p. 3-5). Definitions that emphasize the oral aspect of fluency may, at least in part, account for why fluency has not historically received much attention. The importance of oral reading pales dramatically in comparison to that of silent reading comprehension. Most readers spend a minuscule amount of time doing oral reading as compared to silent reading.

A definition of fluency needs to encompass more than oral reading. *The Literacy Dictionary: The Vocabulary of Reading and Writing* defined fluency as "freedom from word identification problems that might hinder comprehension" (Harris & Hodges, 1995, p. 85). This definition enlarges our understanding of reading fluency to include comprehension. Samuels (2002), a pioneer in research and theory in reading fluency, cited this expanded definition as a major force in elevating the importance of fluency in the field of reading.

The correlation between fluency and comprehension was clearly established by a large-scale data analysis from the National Assessment of Educational Progress in Reading (Pinnell et al., 1995). In that study, 44% of the subjects were not fluent when reading grade-level appropriate materials; the study also showed a significant, positive relationship between oral reading fluency and reading comprehension. However, the relationship between fluency and comprehension is fairly complex. This complexity was summed up well by Stecker, Roser, and Martinez (1998) in their review of fluency research: "The issue of whether fluency is an outgrowth [of] or a contributor to comprehension is unresolved. There is empirical evidence to support both positions" (p. 300). However, in the end they concluded, "Fluency has been shown to have a 'reciprocal relationship' with comprehension, with each fostering the other" (p. 306).

A comprehensive definition, then, would relate the centrality of fluency to reading comprehension and its established dimensions. We propose the following synthesis of the definitions in the *Report of the National Reading Panel* (NICHD, 2000) and *The Literacy Dictionary* (Harris & Hodges, 1995):

> Reading fluency refers to efficient, effective word-recognition skills that permit a reader to construct the meaning of text. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension.

We think that the issue of a definition is not trivial but central to making important decisions about the teaching and assessment of fluency. Directly related to a definition is whether a "surface" or "deep" construct of fluency is adopted. A surface construct of fluency builds on an oral

reading definition and views the development of fluency as the direct treatment of accuracy, speed, and prosody of oral reading. A surface view of fluency leads to practices such as simply urging students to read faster. On the other hand, a deep construct views fluency far more broadly as part of a developmental process of building decoding skills that will form a bridge to reading comprehension and that will have a reciprocal, causal relationship with reading comprehension. In a deep view of fluency, it becomes necessary to think about fluency as part of a child's earliest experiences with print and with the phonology that becomes associated with that print. In this view, efficient decoding is consistently related to comprehension.

Historical development of the construct of reading fluency

While an early discussion of the construct of reading fluency is found in the classic publication by Huey (1908/1968), most discussions of fluency trace their modern theoretical foundations to the 1974 seminal article by LaBerge and Samuels. These researchers argued that human beings can attend to only one thing at a time. We are able to do more than one thing at a time if we alternate our attention between two or more activities, or if one of the activities is so well learned that it can be performed automatically. Reading successfully is a complex interaction of language, sensory perception, memory, and motivation. To illustrate the role of fluency, it helps to characterize this multifaceted process as including *at least* two activities: (1) word identification or decoding and (2) comprehension, or the construction of the meaning of text. In order for reading to proceed effectively, the reader cannot focus attention on both processes. Constructing meaning involves making inferences, responding critically, and so on, and it *always* requires attention. The nonfluent reader can alternate attention between the two processes; however, this makes reading a laborious, often punishing process. If attention is drained by decoding words, little or no capacity is available for the attention-demanding process of comprehending. Therefore, automaticity of decoding—a critical component of fluency—is essential for high levels of reading achievement.

Stanovich (1986) also contributed significantly to elevating the importance of reading fluency. In his classic article, he demonstrated a clear relationship between fluency and the amount of reading in which a reader engages. Readers who achieve some fluency are likely to read more extensively than readers who lack fluency because the latter find reading difficult. Stanovich pointed out that as a result of reading more extensively, readers grow in all the skills that contribute to fluency and in fluency itself. Nonfluent readers who avoid reading fall further and further behind.

The *Report of the National Reading Panel* (NICHD, 2000) significantly elevated attention to fluency. The panel's review largely reflected the position that "fluency develops from reading practice" (p. 3-1). Therefore, much of the review was devoted to analyzing the research supporting two major approaches to providing students with reading practice: "first, procedures that emphasize repeated oral reading practice or guided repeated oral reading practice; and second, all formal efforts to increase the amounts of independent or recreational reading that students engage in" (p. 3-5). The panel concluded that there is substantial evidence to support the use of repeated reading procedures. However, they raised questions about the evidence to support wide independent reading for promoting fluency:

> There seems little reason to reject the idea that lots of silent reading would provide students with valuable practice that would enhance fluency and, ultimately, comprehension.... [I]t could be that if you read more, you will become a better reader; however, it also seems possible that better readers simply choose to read more. (p. 3-21)

In essence, the panel concluded that while there is very strong correlational support for independent reading contributing to fluency, there is no convincing experimental research to show that increasing independent reading will increase fluency or reading achievement.

The previous discussion of fluency and of the related research is certainly not a comprehensive review. Many important research findings are omitted. For more comprehensive discussions of fluency, readers are encouraged to consult reviews, such as those by the National Reading Panel (NICHD, 2000), Reutzel (1996), Stecker at al. (1998), and

the entire Summer 1991 (volume 30, number 3) issue of the journal *Theory Into Practice*.

While the National Reading Panel's report (NICHD, 2000) is clearly instructive for its critical review of how practice may affect fluency, the position taken in this article is that a much broader approach is warranted, one that addresses the need for systematic, long-term, explicit fluency instruction along with careful monitoring and assessment for at least some students. Rather than focus solely on how to improve fluency when it is not developing as expected, it would seem instructive to examine the elements of early literacy that contribute to fluency.

Ehri's stages of reading development and fluency

Ehri (1995, 1998) has developed a carefully researched, elegant theory of how readers systematically progress in stages to achieve fluency, which is in line with a "deep," developmental construct of fluency. We review her theory because it brings coherence to much of the research on fluency and because it offers a framework for instruction designed to promote and improve fluency. Ehri distinguished four stages of reading development.

Readers at the Pre-Alphabetic Stage have no appreciation of the alphabetic principle—the idea that, in languages like English, there is a systematic relationship between the limited number of sounds of the language and the graphic forms (letters) of the language. At the Pre-Alphabetic Stage, children attempt to translate the unfamiliar visual forms of print into familiar oral language through visual clues in the print. Children might remember the word *monkey* by associating the descending shape of the last letter with a monkey's tail. Obviously this is not a productive approach and quickly leads to confusion because *my*, *pony*, and many other words would also be read as *monkey*.

At the Partial Alphabetic Stage, readers have learned that letters and sounds are related, and they begin to use that insight. However, they are not able to deal with the full complexity of the sounds in words, so they aren't able to make complete use of the letter–sound relationships. Therefore, children focus on the most salient parts of a word and consequently use initial and, later, final letters as the clues to a printed word's pronunciation. If readers at

this stage learn that the letter sequence *g-e-t* is *get*, they may focus just on the *g* and the sound it represents to identify the word. However, using this strategy of focusing on the first letter, the letter sequences *give*, *go*, and *gorilla* might also be identified as *get*. While children at this stage of development will make errors in identifying words, they can make progress toward becoming fluent because they have developed the insight that the letters of a word are clues to the sounds of the word.

As children become more familiar with letters and sounds, they move into the Fully Alphabetic Stage. Now, even though they may never have seen it in print before, if they know the sounds commonly associated with the letters *b-u-g*, they can think about the sounds for each of the letters and blend them together to arrive at the pronunciation of the word. As a result of encountering the printed word *bug* several times, as few as four times according to a widely cited study (Reitsma, 1983), children come to accurately, instantly identify the word *bug* without attending to the individual letters, sounds, or letter–sound associations. Ehri (1998) described skilled reading in the following way: "Most of the words are known by sight. Sight reading is a fast-acting process. The term *sight* indicates that sight of the word activates that word in memory, including information about its spelling, pronunciation, typical role in sentences, and meaning" (pp. 11–12). This instant, accurate, and automatic access to all these dimensions of a printed word is the needed fluency that will allow readers to focus their attention on comprehension rather than on decoding. It is important to note that Ehri's theory and research indicate that it is the careful processing of print in the Fully Alphabetic Stage that leads to this rapid, instant recognition. Partial Alphabetic readers store incomplete representations of words and, therefore, confuse similar words, such as *were*, *where*, *wire*, and *wore*. However, once the word form is fully processed, with repeated encounters of the word, it is recognized instantly.

Readers who recognize whole words instantly have reached the Consolidated Alphabetic Stage. They also develop another valuable, attention-saving decoding skill. Not only do readers at this stage store words as units, but also repeated encounters with words allow them to store letter patterns across different words. A multiletter unit like *-ent* will be stored as a unit as a result of reading the

words *went*, *sent*, and *bent*. Upon encountering the word *dent* for the first time, a consolidated alphabetic reader would need to connect only two units: *d* and *-ent*, rather than the four units that the Fully Alphabetic reader would need to combine. While this approach to reading a word is faster than blending the individual phonemes, it is not as fast and efficient as sight recognition of the word. Readers who have reached the Consolidated Stage of reading development are in a good position to progress toward increasingly efficient fluency; however, in addition to these advanced word-identification skills, they also need to increase their language vocabulary development in order to reach advanced levels of fluent reading.

An instructional program based on a deep construct of fluency

Our perception is that until recently some, though certainly not all, educators took a rather simplistic approach to developing fluency that is summed up in the admonition "read, read, read." The expectation was that if students read more, they would achieve fluency. However, research and theory suggest that at least some students will need expert instruction and teacher guidance in order to progress efficiently through the stages of reading development. We propose a nine-step developmental program for improving fluency. Some of the steps, such as building the graphophonic foundation for fluency or high-frequency vocabulary, are usually accomplished in a relatively short period of time (often a year or two), while others, such as building oral language skills, are unending. Our goal in this article is to outline the rationale and the breadth of instruction needed for developing a deep construct of fluency. We give some references that offer suggestions for instructional strategies and materials, but space limitations preclude treating each of these areas in depth. The nine-step program should include

1. Building the graphophonic foundations for fluency, including phonological awareness, letter familiarity, and phonics.
2. Building and extending vocabulary and oral language skills.

3. Providing expert instruction and practice in the recognition of high-frequency vocabulary.
4. Teaching common word parts and spelling patterns.
5. Teaching, modeling, and providing practice in the application of a decoding strategy.
6. Using appropriate texts to coach strategic behaviors and to build reading speed.
7. Using repeated reading procedures as an intervention approach for struggling readers.
8. Extending growing fluency through wide independent reading.
9. Monitoring fluency development through appropriate assessment procedures.

Building the graphophonic foundations for fluency

Ehri listed three prerequisite graphophonic capabilities as foundations for fluency: (1) letter familiarity, (2) phonemic awareness, and (3) knowledge of how graphemes typically represent phonemes in words.

A recent publication from the International Reading Association (Strickland & Schickendanz, 2004) offered practical, research-based approaches to developing graphophonic skills, including letter familiarity, in emergent readers. Instruction in the area of phonological awareness has been addressed widely (e.g., Adams, Foorman, Lundberg, & Beeler, 1998; O'Connor, Notari-Syverson, & Vadasy, 1998.)

The importance of the three graphophonic factors is fully documented in numerous research reports (e.g., Adams, 1990; NICHD, 2000). In order to move from the Pre-Alphabetic Stage to the Partial Alphabetic and Fully Alphabetic Stages (Ehri, 1998), students need to grasp the alphabetic principle and to apply efficiently information about the relationship between the letters and sounds (phonics) to recognize words. This clearly requires a high level of familiarity with letter forms as well as the ability to segment and blend the smallest units of spoken language, phonemes.

Oral language foundations for fluency

In addition to the graphophonic skills, Ehri's (1998) theory requires a foundation in language

skills so that students are familiar with the syntax or grammatical function of the words and phrases they are reading and with their meanings.

Developing the oral language and vocabulary skills of children, particularly those who are learning English as a second language or those who spent their preschool years in language-restricted environments, is one of the greatest challenges facing educators. Many excellent resources exist for meeting this challenge. Recent examples include texts by Beck, McKeown, and Kucan (2002); Blachowicz and Fisher (2002); and Nagy (1988).

Ehri (1998) showed that progress in reading beyond the beginning stages is dependent on oral language development, pointing out that reading words, particularly reading them fluently, is dependent on familiarity with them in their oral form. If the syntactic and meaning aspects of the word are to be activated, they must be part of what the reader knows through oral language development. For the word-recognition process as proposed in Ehri's theory to be complete, it must connect with meaning that has been developed as another aspect of language development. Consider the following words: *zigzags* and *onychophagia* (nail biting). Mature readers have no difficulty very rapidly decoding the first word, even though it is one of the least frequent words in printed English. However, it takes mature readers much longer to arrive at a pronunciation of the second word because it not only infrequently appears in print but is also very infrequently used in speech and, therefore, is not likely to be a word in a mature reader's mental lexicon. Unless a printed word can connect with both the phonological memory for the word and also with the syntactical and meaning aspects of the word, it cannot be fluently decoded or read. It seems unfortunate that many surface discussions of fluency fail to make the point that fluency is dependent on the reader's vocabulary as well as on his or her decoding skills.

Teaching high-frequency vocabulary

High-frequency words are those words that appear over and over again in our language—words such as *the, of, and, at,* and *to*. If developing readers cannot instantly identify these words, they are unlikely to become fluent.

One approach to building fluent recognition of high-frequency vocabulary, exceedingly popular with primary-grade teachers, is the use of word walls where high-frequency vocabulary is posted and practiced (P.M. Cunningham, 2000). Cunningham also offered a variety of other approaches to teaching high-frequency words, as did Bear, Invernizzi, Templeton, and Johnston (1996).

Ehri's (1995, 1998) theory and research also offered important, practical teaching suggestions. High-frequency words often have been seen as a serious challenge because many of them don't lend themselves to straightforward application of decoding skills; they are, in the jargon of reading instruction, phonically irregular—words such as *the, of, was,* and *have*. Teaching high-frequency words can be difficult. This difficulty may very well contribute to the periodic abandonment of phonics approaches and the rise of whole-word approaches to teaching beginning reading skills, with accompanying emphasis on drill using flashcards to force children to read the words as a whole. Ehri's work suggested that they also contain many letter–sound regularities, and that these regularities are the best mnemonics for developing accurate, instant recognition. For example, while the word *have* does not follow the generalization about the effect of a final *e* on a preceding vowel sound, the *h, v,* and *e* all behave as they should, and the *a* does represent a sound that it often represents. Ehri suggested that we should point out the regular elements of irregular words in order to help children gain instant recognition of them. This is a practice rarely mentioned by "experts" or used by teachers, but it might play a very important role in avoiding difficulty with such words and thus promoting the development of fluency.

Recognizing word parts and spelling patterns

Word parts and spelling patterns are combinations of letters such as *at, ell, ick,* and *op*, which are found as units in many words that appear in beginning reading texts.

Here again, P.M. Cunningham (2000) and Bear et al. (1996) are among the many resources that offer practical teaching suggestions, including a list of the most common word parts found in beginning reading materials.

Introducing students to multiple-letter units clearly helps to move them from the Fully Alphabetic to the Consolidated Alphabetic Stage. However, Ehri's (1995, 1998) research and theory offered an important instructional generalization—students should first be introduced to and made cognizant of the individual letters and sounds that constitute the rime (a Fully Alphabetic approach) in order to better recall and identify the unit.

Teaching a decoding strategy

There are several major ways in which words can be recognized or identified in print: instantly as units; through recognition and blending of phonic elements; through the context in which they appear, including language/sentence context and picture clues; or by checking the phonetic respellings of a dictionary or glossary. Ehri's (1995) theory is clear: The best way to recognize words is through instant recognition that drains no attention. All other approaches require attention. However, when a word is not instantly recognized, it is useful for readers to be strategic.

Ehri's (1995) theory suggested a strategic approach to dealing with words that are not instantly recognized. In kindergarten and the beginning of first grade, emphasis is on moving young readers from the Partial Alphabetic Stage to the Fully Alphabetic Stage of reading, with an emphasis on careful attention to the graphophonic characteristics of the word. By the middle of first grade, the goal is to move students increasingly into the Consolidated Alphabetic Stage. The italicized portion of the following strategy is recommended as young readers become familiar with word parts.

- Look at the letters from left to right.
- As you look at the letters, think about the sounds for the letters.
- Blend the sounds together *and look for word parts you know* to read the word.
- Ask yourself, "Is this a word I know? Does it make sense in what I am reading?"
- If it doesn't make sense, try other strategies (e.g., pronouncing the word another way or reading on).

Readers who are at the Partial Alphabetic and Fully Alphabetic Stages will need to look careful-

ly at the word they are trying to identify, think about the sounds the letters are likely to represent, and then use the skill of phoneme blending to try to arrive at the correct decoding or pronunciation of the word. Because some words are not completely phonically regular, students should then be encouraged to ask themselves if their use of phonics results in the identification of a word that makes sense—that it is a word they have heard before and fits the context of what they are reading. As students begin to move from the Fully Alphabetic to the Consolidated Alphabetic Stage of development, in addition to using phonic elements, they should also be encouraged to look for word parts (chunks) and spelling patterns that they know, such as phonograms. The presentation of phonics and word parts, followed by use of context, appears to be, by far, the best order.

Use of context as the primary approach to identifying words has serious limitations. First, if the context is highly predictive of a word, it is likely that students will not pay attention to the graphic information in the word. Careful processing of the printed form is what eventually enables a reader to recognize that word instantly. This is a major limitation of the predictable texts that use very heavy, artificial context to allow word identification. Second, context rarely leads to the correct identification of a specific word. Ehri (1998) reviewed research suggesting that words in a text that carry the most meaning can be correctly identified by context only about 10% of the time. However, context and the other approaches to decoding words do play an important role in decoding—that of confirming the identification of words. As Ehri put it,

As each sight word is fixated, its meaning and pronunciation are triggered in memory quickly and automatically. However, the other word reading processes do not lie dormant; their contribution is not to identify words in text but to confirm the identity already determined. Knowledge of the graphophonic system confirms that the word's pronunciation fits the spelling on the page. Knowledge of syntax confirms that the word fits into the structure of the sentence. World knowledge and text memory confirm that the word's meaning is consistent with the text's meaning up to that point. (p. 11)

Using appropriate texts to promote fluency

In order for progress in fluency to be made, students need to practice and apply their growing word-identification skills to appropriate texts. Appropriate texts are particularly critical for students having difficulty with word-identification skills. Guided reading is once again a useful way to match students and texts. Resources such as the work of Fountas and Pinnell (1996) offer guidance in selecting texts and providing appropriate instruction with those texts.

Hiebert and Fisher (in press) studied fluency development as it relates to the features of the texts used for promoting fluency. Specifically, they were interested in examining the effects of texts in which particular text features were carefully controlled. The treatment texts that Hiebert and Fisher designed had the following key features: a small number of unique words, a high percentage of most frequently used words, and often repeated critical words (those words that influence the meaning of the text most). Students in the comparison group read from texts typically associated with commercial reading programs. Students reading in the treatment texts made significant gains in fluency over their peers in the comparison condition. There also seemed to be an effect for comprehension for second-language learners. These findings suggested that the features of the texts being used to promote fluency should be carefully considered.

Using repeated reading procedures

As noted earlier in this article, the *Report of the National Reading Panel* (NICHD, 2000) was unequivocal in its support of repeated reading procedures. The references described a range of procedures in sufficient detail to allow teachers to employ them with students who need extra support in developing fluency. These procedures included those described as repeated reading (Samuels, 1979), neurological impress (Heckelman, 1969), radio reading (Greene, 1979), paired reading (Topping, 1987), "and a variety of similar techniques" (p. 3-1). A review of these approaches suggests substantial differences in the procedures used and the amount of teacher guidance offered (Chard, Vaughn, & Tyler, 2002; Kuhn & Stahl, 2000).

However, as noted, the panel concluded that all appeared to have merit.

Encouraging wide independent reading

For more able readers, repeated readings of the same texts may not be as necessary as they are for struggling readers. Increasing the amount of reading these able readers do may be as beneficial, and perhaps more so (Mathes & Fuchs, 1993).

The beneficial effects of wide reading appear to have been somewhat called into question by the *Report of the National Reading Panel* (NICHD, 2000), which reached the following conclusion: "Based on the existing evidence, the NRP can only indicate that while encouraging students to read might be beneficial, research has not yet demonstrated this in a clear and convincing manner" (p. 3). It is important to keep in mind that the National Reading Panel used restrictive criteria for what they included as research and also that it clearly held out the possibility of beneficial effects for wide reading.

Previous highly respected research syntheses have been far less restrained about the salutary effects of wide reading. For example, *Becoming a Nation of Readers* (Anderson, Hiebert, Scott, & Wilkinson, 1985) concluded,

> Research suggests that the amount of independent, silent reading that children do in school is significantly related to gains in reading achievement.... Research also shows that the amount of reading students do out of school is consistently related to gains in reading achievement. (pp. 76–77)

In her critical review of beginning reading research, Adams (1990) concluded, "Children should be given as much opportunity and encouragement as possible to practice their reading. Beyond the basics, children's reading facility, as well as their vocabulary and conceptual growth, depends strongly on the amount of text they read" (p. 127).

Stanovich and his colleagues (A.E. Cunningham & Stanovich, 1998; Nathan & Stanovich, 1991; Stanovich, 1986) have presented impressive research results and theoretical arguments for the value of wide reading. The evidence and rationale that they present, however, is that the positive relationship between reading achievement and wide reading may not be affected exclusively through

the development of fluency but through the development of language and cognitive abilities as well.

If students are making adequate progress with fluency, wide reading rather than repeated readings may lead to greater improvements in vocabulary and comprehension. However, for less able readers experiencing particular difficulties with fluency, repeated readings remain an important approach to building fluency.

The assessment of fluency

As noted at the beginning of this article, fluency has been referred to as the "neglected aspect" of reading. The assessment of fluency, in particular, appears to have received very limited attention. There are few research studies that have investigated how fluency should be assessed or what criteria should be applied to determine whether or not a reader has achieved it. Perhaps it is this dearth of data that led the National Reading Panel (NICHD, 2000) to conclude,

> A number of informal procedures can be used in the classroom to assess fluency: informal reading inventories, miscue analysis, pausing indices, and reading speed calculations. All these assessment procedures require oral reading of text, and all can provide an adequate index of fluency. (p. 3-9)

While few experimental studies have been conducted using these informal procedures, it may very well have been that the National Reading Panel recognized the practical need for classroom assessment, leading them to endorse procedures that may not have the strong research support they more typically require in other parts of the report.

To meet this practical need, there are many published informal inventories, such as the Qualitative Reading Inventory–III, and leveled texts, such as *Leveled Reading Passages* (Houghton Mifflin, 2001). These are just two examples of instruments that can be used to periodically and practically assess the four dimensions of fluency that are necessary for a full, deep, developmental construct of fluency: oral reading accuracy, oral reading rate, quality of oral reading, and reading comprehension.

Teachers who want to assess selective aspects of fluency can use guidelines that have been suggested for assessing oral reading rate and accuracy (e.g., Hasbrouck & Tindal, 1992; Rasinski, 2003).

Likewise, procedures have been established for assessing the quality of oral reading using standardized rubrics that go beyond rate and accuracy, such as those based upon National Assessment of Educational Progress (NAEP) data (Pinnell et al., 1995).

We recommend that teachers at second grade and beyond take measures of fluency, at least at the beginning and end of a school year, to gauge progress in this important area and to check periodically through the year any students who are making doubtful progress. A more comprehensive review of the research related to fluency assessment is beyond the scope of this article.

Fluency is necessary

While the construct of fluency might have been neglected in the past, it is receiving much-deserved attention presently. A very strong research and theoretical base indicates that while fluency in and of itself is not sufficient to ensure high levels of reading achievement, fluency is absolutely necessary for that achievement because it depends upon and typically reflects comprehension. If a reader has not developed fluency, the process of decoding words drains attention, and insufficient attention is available for constructing the meaning of texts.

Fluency builds on a foundation of oral language skills, phonemic awareness, familiarity with letter forms, and efficient decoding skills. Ehri's (1995) description of the stages of word recognition explains how readers come to recognize words by sight through the careful processing of print.

Substantial research has also been conducted on how best to develop fluency for students who do not yet have it. While there is a dearth of experimental research studies on developing fluency through increasing the amount of independent reading in which students engage, there is substantial correlational evidence showing a clear relationship between the amount students read, their reading fluency, and their reading comprehension. However, students who are nonachieving in reading are not in a position to engage in wide reading, and they may need more guidance and support in order to develop fluency. Research shows that a variety of procedures based on repeated readings can help readers to improve their fluency.

Little research is available to guide the assessment of fluency. While more research is needed on the issues of adequate rates of fluency at various grade levels and for judging the quality of oral reading, there is good agreement that the comprehensive assessment of fluency must include measures of oral reading accuracy, rate of oral reading, and quality of oral reading. There is also growing agreement that these dimensions of fluency must be assessed within the context of reading comprehension. Fluency without accompanying high levels of reading comprehension is of very limited value.

Pikulski is professor emeritus at the University of Delaware. He can be contacted at 12 Dawn Meadow Lane, Newark, DE 19711, USA. Chard teaches at the University of Oregon at Eugene.

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