

CURRENT RESEARCH
IN READING/LANGUAGE ARTS



FLUENCY: THE BRIDGE FROM DECODING TO READING COMPREHENSION

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INTRODUCTION

Fluency, which has been referred to as a “neglected” and “ignored” aspect of reading (National Reading Panel, 2000), is receiving substantial attention at this time from both researchers and practitioners. This attention may stem, at least in part, from the fact that the highly influential Report of the **National Reading Panel** discusses fluency as one of only five critical components of the reading process.

Definitions of Reading Fluency

The National Reading Panel report defines reading fluency as “...the ability to read text quickly, accurately, and with proper expression” (p. 3–5). All three dimensions appear critical to a full definition of reading fluency (Dowhower, 1991). The fact that two of the three dimensions of fluency, accuracy and expressiveness, can be observed *only* through oral reading may have contributed to the limited amount

of attention that fluency received until recently. Fluency was seen essentially as a word recognition and oral reading phenomenon, and the importance of oral reading pales dramatically in comparison to that of silent reading comprehension. Except, perhaps, as beginning readers in school, we spend a miniscule amount of time doing expressive oral reading as compared to silent reading comprehension.

The Literacy Dictionary: The Vocabulary of Reading and Writing, on the other hand, defines fluency as “freedom from word identification problems that might hinder comprehension” (Harris and Hodges, 1995, p. 85). Samuels, a pioneer in research and theory in reading fluency, cites the alteration and enlargement of the construct of fluency to include reading comprehension as a major force in elevating the importance of the construct in the field of reading. He notes, “To experience good reading comprehension, the reader must be able to identify words quickly and easily” (Samuels, 2002, p. 167).

The correlation between fluency and reading comprehension was clearly established by a

large-scale analysis of data from the National Assessment of Educational Progress in Reading (Pinnell et al., 1995). In that study, 44 percent of the subjects were found to be disfluent when reading grade-level appropriate materials that they had previously read silently; the study also showed a significant, positive relationship between oral reading fluency and reading comprehension performance.

A comprehensive definition then would seem to relate the centrality of fluency to reading comprehension and the established dimensions of the construct. We would propose the following definition: *Reading fluency refers to rapid, efficient, accurate word recognition skills that permit a reader to construct the meaning of text. Fluency is also manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension.*

Constructs of Reading Fluency

While discussion of the construct of reading fluency is found as early as in the classic 1908 publication by Edmund Huey (Chard, Vaughn, and Tyler, 2002), most discussions of fluency trace its modern theoretical foundations to the 1974 seminal article by LeBerge and Samuels. These researchers argued that, based on information-processing theory and research, human beings are single-channel processors; that is, we 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. They pointed out that reading requires *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 efficiently and effectively, the reader cannot focus attention on both of the processes. The non-fluent reader can, as do many beginning readers who have not yet developed automatic decoding skills, alternate attention between the two processes.

Constructing meaning—which involves putting words into meaningful thought units, making inferences, relating information being derived from the text with background knowledge, and responding critically to the meaning that is constructed—always requires attention. For readers who must alternate between attending to the decoding of words and the construction of meaning, reading is a slow, laborious, inefficient, ineffective, and often punishing process. If the limited attention and cognitive capacity is drained by the processing of decoding words, little or no capacity is available for the attention-demanding process of constructing and responding to the meaning of a text. Therefore, automaticity of decoding fluency is essential for high levels of reading achievement.

Keith Stanovich (1986) also contributed significantly to elevating the importance of reading fluency in a classic article in which he indicated a reciprocal relationship between fluency and the amount of reading in which a reader engages. Readers who have achieved some fluency are more likely to engage in more extensive amounts of reading than readers who lack fluency. The latter would find reading difficult and laborious. However, Stanovich goes on to point out that as a result of engaging in extensive amounts of reading, readers grow in all those skills that contribute to fluency and in fluency itself. Non-fluent readers who avoid reading fall further and further behind.

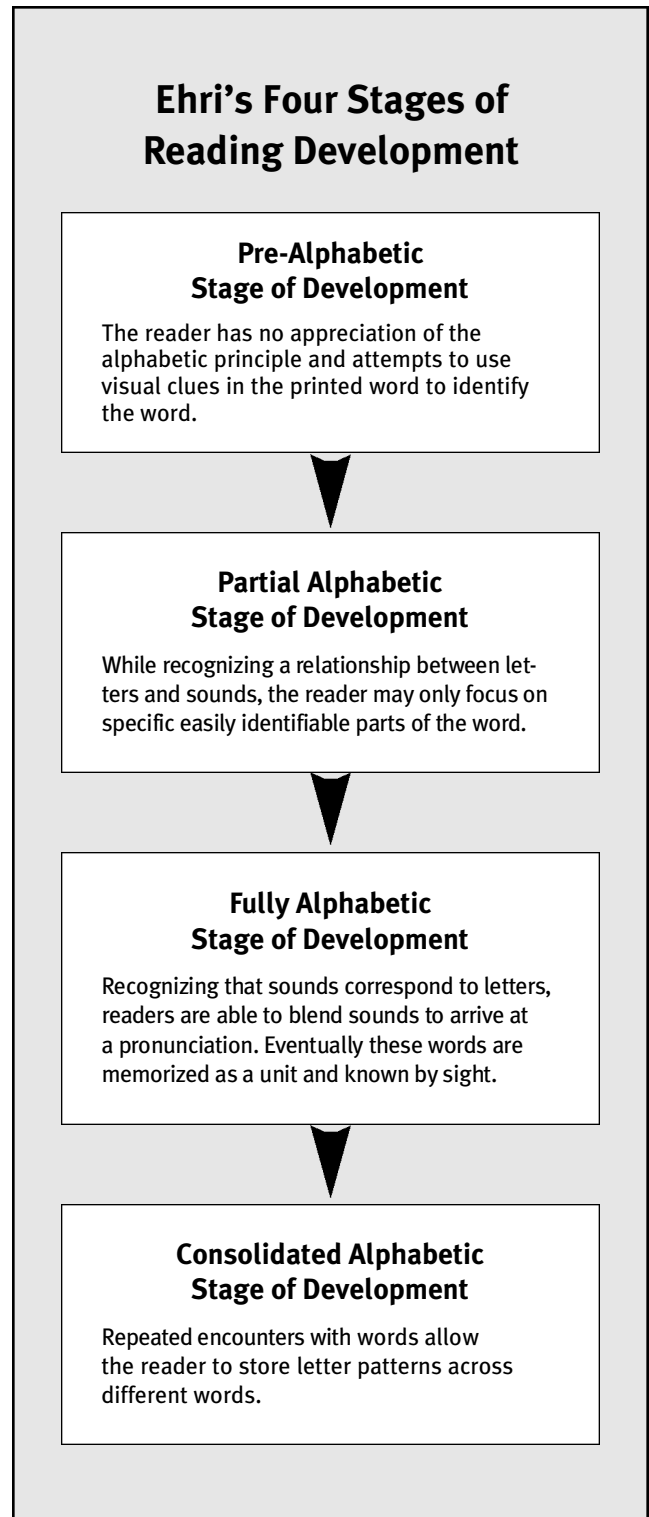
Fluency has also been related to theoretical constructs of how reading proceeds through developmental stages. Kuhn and Stahl (2000) summarize how the development of fluency is related to the stages of development described by Chall (1996) and by Ehri (1995). Chall's is a broad theoretical formulation that describes several stages of reading comprehension development in addition to decoding; therefore we will focus on Ehri's theory, which focuses on decoding through a stage of fluency development.

Ehri's Stages of Reading Development as They Relate to Fluency

In line with the theory of automaticity and the definition of fluency we have proposed, Ehri (1998) has noted, "Being able to read words by sight automatically is the key to skilled reading of text. This allows readers to process words in text quickly, without attention directed to the word itself" (p. 11). Ehri has developed a carefully researched, elegant theory of how readers systematically progress in stages from being non-readers to the point where they can recognize words effortlessly.

Readers at the **Pre-alphabetic Stage of Development** have no appreciation of the alphabetic principle—that in languages like English, there is a systematic relationship between the limited number of sounds of a language (approximately 40 in the case of English) and the graphic forms, or letters, of the language. At this stage children attempt to translate the unfamiliar visual forms of print into familiar oral language through some visual clue that is part of the print. For example, children might remember the printed word *monkey* by associating the descending shape of the last letter of the word with a monkey's tail. Obviously this is not a productive approach and quickly leads to confusion since *my, pony, honey,* and many other words would also be read as *monkey* based on the selected visual clue.

At the **Partial Alphabetic Stage of Development**, readers have latched onto the notion that there is a relationship between the letters and sounds and begin to use that insight. However, their ability to deal with the complexity of the sounds of words results in an incomplete use of that relationship. Therefore, they tend to focus on the most salient, easiest parts of a word to deal with and, consequently, use initial and, later, final letters as the clues to a printed word's pronunciation. For example, if readers at this stage of development are taught that the letter sequence *g-o* is the word *go*, 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, get, gone,*



and *gorilla* might also, incorrectly, be identified as *go*. While children at this stage of development will make errors in identifying words, they are in a position to make progress since they have developed the insight that the letters of a printed word are clues to the sounds of the word.

As children become more familiar with the forms of printed letters, are able to analyze the sounds that compose words, and become increasingly familiar with the sounds that letters are likely to represent, they move into the **Fully Alphabetic Stage of Development**. 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 *bug*. Ehri's theory then indicates that as a result of encountering the printed word *bug* several times, as few as four times according to a widely cited study (Reitsma, 1983), they come to accurately and instantly identify the word *bug* without attending to the individual letters, sounds, or letter-sound associations. Ehri (1998) describes 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" (p. 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*, *wore*, etc. However, once the word form is fully processed, with repeated encounters of the word, it is recognized instantly.

As readers gain skill in processing print, they move into the **Consolidated Alphabetic Stage of Development** and also develop another valuable,

attention-saving decoding skill. In addition to storing words as units, repeated encounters with words allow a reader to store letter patterns across different words. Using Ehri's example, the multiletter unit –est will be stored as a consolidated unit as a result of reading the words *nest*, *pest*, *rest*, *test*, *vest*, and *west*. Upon encountering the word *chest* for the first time, a consolidated alphabetic reader would need to connect only two units: ch and –est, rather than the five units that the fully alphabetic reader would need to combine. As noted, 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.

Before closing this discussion of Ehri's theory and research it seems important to briefly indicate how she addresses one other approach to decoding words—the use of context. Ehri's theory is clear—the best way to recognize words is through instant recognition that drains no attention, and therefore contributes most to fluency. All other approaches or use of context require attention. Use of context has another, more serious limitation—it rarely leads to the correct identification of the word. Ehri reviews research that indicates that the words in a text that carry the most meaning could be correctly identified by context only about ten percent of the time. However, context and the other approaches to decoding words do play an important role in reading, that of confirming the identification of words. As she puts 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. Word knowledge and text memory confirms that the word's meaning is consistent with the text's meaning up to that point" (Ehri, 1998, p. 11).

Foundations for Fluency

In her discussion of how students build sight recognition for words during their first few years of reading, Ehri lists three prerequisite “graphophonic” capabilities: 1) letter familiarity; 2) phonemic awareness; and 3) knowledge of how graphemes typically represent phonemes in words. Ehri then notes that further progress depends on learning multiletter units or spelling patterns. In addition, Ehri’s theory and research require that students are familiar with the syntax or grammatical function of the words they are reading and with the meaning of those words. Ehri also shows that progress in reading beyond the beginning stages is dependent on oral language development.

The importance of the three graphophonic factors listed above is fully documented in numerous research reports (e.g. Adams, 1990; National Reading Panel, 2000; Snow et al., 1998). In order to move from the pre-alphabetic stage to partial and fully alphabetic stages, students need to grasp the alphabetic principle and to efficiently apply information about the relationship between the letters and sounds of English (more commonly referred to as phonics) to recognize words. This clearly requires a high level of familiarity with letter forms and the ability to segment and blend the smallest units of spoken language (phonemes).

Progress in reading beyond the beginning stages of reading depends upon the ability to recognize words instantly and to deal with spelling patterns or multisyllabic units that can take the forms such as prefixes, suffixes, syllables, and rimes. Recognition of these larger units comes from having read several words containing them, but also from learning to spell words.

Finally, Ehri’s theory also points out the fact that reading words is also dependent on familiarity with them in their oral form. Recall the previously cited quote: “The term sight indicates that sight of the word activates that word in memory including information about its spelling, pronunciation, typical role in sen-

tences, and meaning” (p. 11–12). 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.

BUILDING FLUENCY IN DEVELOPING READERS

Our perception is that until very recently many educators took a rather simplistic approach to developing fluency which is summed up in the deceptively simple admonition: “Read, read, and read some more.” The expectation was that if students read more, they would achieve fluency. However, Ehri’s research and theories suggest that at least some students will need expert teacher guidance in order to progress efficiently through stages of reading development to fluency. Students who lack the necessary foundations for developing decoding skills are in no position to read, read, and read some more. Students who engage in reading, but who employ the guessing strategies of the Partial Alphabetic reader, are not likely to make optimal progress in reading. Fortunately, several research studies have focused on the details of instruction that seem most promising for improving reading fluency. These instructional practices include: modeled reading, repeated reading of familiar text, wide independent reading, coached reading of appropriately selected materials, chunking of text, and word reading practice.

Improve reading fluency through

- Modeled reading
- Repeated reading of familiar text
- Wide independent reading
- Coached reading of appropriately selected materials
- Chunking of text
- Word reading practice.

Modeled Reading

One way to enhance fluency is for teachers to read aloud to students (Dowhower, 1987; Hoffman, 1987; Smith, 1979). The process of reading aloud to students needs to be supplemented with procedures which actually engage students in interaction with text, but reading aloud does provide them with a model of how to pace reading in connected text and how to infuse expression (attend to dialogue marks and punctuation). Taped or computer modeled reading is also a viable way to provide fluency support. However, for younger and less able readers taped or computer modeled reading seems more effective than no model, but not as effective as a teacher model (Daly and Martens, 1994). For lower performing readers, an additional benefit of having text read initially by a model improved comprehension. It seems that the reading model allowed students to focus on the content of the passage initially before they read it independently (Monda, 1989). While it varies from study to study whether students followed along in copies of the texts, we recommend this as a way to engage children in the text prior to their reading it independently.

Repeated Reading of Familiar Text

Rereading text or repeated oral reading is perhaps the most frequently documented approach to improving fluency (National Reading Panel, 2000; Rashotte and Torgesen, 1985) and has been associated with improved outcomes for young students (O'Shea, Sindelar, and O'Shea, 1987) as well as college students (Carver and Hoffman, 1981). Generally, intervention research on fluency development has been dominated by research on repeated reading. This likely reflects the application of the theory that fluent reading is promoted by frequent opportunities to practice in familiar text and to increased exposure to words.

Wide Independent Reading

Research does not yet clearly indicate whether repeated reading is superior to wide, sustained reading of different texts. Currently, it seems that for more able readers, repeated reading of the same texts is not as necessary as it is for struggling readers and that increasing the amount of reading that is done is sufficiently, and perhaps more, beneficial (Homan, Klesius, and Hite, 1993; Mathes and Fuchs, 1993; Rashotte and Torgesen, 1985).

The beneficial effects of wide reading were somewhat called into question by the fairly recent *Report of the National Reading Panel* (2000) which concluded: "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 NRP used very restrictive criteria for "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 et al, 1985) concludes: "Research suggests that the amount of independent, silent reading that children do in school is significantly related to gains in reading achievement" (p. 76). This same research review concludes: "Research also shows that the amount of reading students do out of school is consistently related to gains in reading achievement" (p. 77). In her critical review of beginning reading research Adams (1990) concluded: "If we want children to read well, we must find a way to induce them to read lots" (p. 5). Adams also concludes: "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).

Keith Stanovich and his colleagues (Cunningham and Stanovich, 1998; Nathan and Stanovich, 1991; Stanovich, 1986; Stanovich and

Cunningham, 1992; Stanovich, Cunningham, and Freeman, 1984; Stanovich and West, 1989) have presented impressive research results and theoretical argument 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.

While the experimental evidence may not be as clear as it should be, there does appear, at least for achieving readers, strong evidence and support for the conclusion of Nathan and Stanovich (1991) that: "If children are to become fluent readers, they need to read a lot. Our job as educators is to see to it that children want to read—that they seek new knowledge via the written word and derive satisfaction and joy from the reading process" (p.179).

Moreover, if students are making adequate progress with fluency, wide reading rather than repeated reading may lead to greater improvements in vocabulary and comprehension. However, for less able readers experiencing particular difficulties with fluency, repeated reading remains an important aspect of an instructional program.

Coached or Assisted Reading

Most researchers agree that accuracy alone is insufficient and that students need to read rapidly if they are going to understand the connections that need to be made between ideas in print (Nathan and Stanovich, 1991). Controlling the difficulty of texts and providing feedback for words missed during reading seem to be associated with improved rate and accuracy for those students developing fluent reading. Advancing students through progressively difficult text based on their performance seems to enhance their overall fluency as does correction and feedback for words read incorrectly.

Providing students with opportunities to read widely and targeting specific elements of fluency building, such as progressively difficult text with corrective feedback, appear to contribute to

improved fluency (Kuhn and Stahl, 2000). Heibert and Fisher (2002) 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 dimensions or features were carefully controlled. The treatment texts Heibert and Fisher designed were characterized as having 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. Using a repeated reading (three times) instructional routine in a nine-week intervention, 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 suggest that the features of the texts being used to promote fluency should be carefully considered.

Chunking Texts

Another approach to fluency building is to provide struggling readers with text in which meaningful groups or words or phrases are signaled for the reader as a means of improving fluency and comprehension (Cromer, 1970; Young and Bowers, 1995). Research reveals that different amounts of text presented in repeated reading do not seem to change the outcome. However, control of the amount of text presented may be beneficial for students who are experiencing difficulty with reading accuracy as it may force them to focus on the words for a longer period of time (Cohen, 1988).

Carbo (1981) used a phrased or chunked approach to assisted repeated reading. She had students listen to tapes and follow along in books in which the text was chunked into short phrases. Carbo reported significant gains in word recognition ability suggesting that this approach might be helpful for improving accuracy.

Several researchers have studied the effects of parsing or chunking texts into phrase units. While

most of these studies have been with older students, Kuhn and Stahl (2000) reported that reading phrase units rather than conventional text does seem to result in improved fluency.

Word Reading Practice

Based on Ehri's stage model of reading and previously offered theoretical descriptions of fluency, the importance of individual word reading automaticity would seem to have practical implications for fluency building. Studies in which teachers had students practice reading lists of words that they were to later encounter in connected texts consistently resulted in increased fluency (Fleisher, Jenkins, and Pany, 1979-80; Levy, Abello, and Lysynchuk, 1997). It is important to note, however, that there was no concomitant increase in comprehension.

THE ASSESSMENT OF FLUENCY

As noted at the beginning of this paper, 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 very few research studies that have investigated how fluency should be assessed or the criteria that should be applied to determine whether or not a reader has achieved fluency. For example, the major review of fluency done by Kuhn and Stahl (2000), while devoting considerable discussion to the construct of fluency and to approaches to developing it, does not directly discuss the topic of the assessment of fluency. Perhaps it is this dearth of data that led the National Reading Panel (2000) to conclude: "A number of informal procedures can be used in the classroom to assess fluency: informal reading inventories (Johnson, Kress, and Pikulski, 1987), miscue analysis (Goodman and Burke, 1972), pausing indices (Pinnell et al. 1995), and reading speed calculations (Hasbrouck and Tindall, 1992). All these assessment procedures require oral reading of text, and all can

provide an adequate index of fluency" (p. 3-9). This seems almost surprising in light of the Panel's insistence on experimental evidence in order to endorse the efficacy of instructional procedures. Few experimental studies have been conducted using these informal procedures. For example, decades ago Pikulski (1974) raised questions about evidence to establish both the reliability and validity of informal reading inventories; the qualitative scale discussed in Pinnell et. al., (1995) is based on a single correlational study. While the norms reported by Hasbrouck and Tindal (1992) are based on a large population of students, that population is not clearly described. The rigor of the study also seems compromised by the fact that a variety of diverse texts were used to collect the data for the oral reading fluency norms.

Perhaps it was recognition that there is a very practical need for classroom assessment that led the Panel to endorse procedures that may not have the strong research they more typically required in other parts of the report.

Near the end of its discussion of the assessment of fluency the National Reading Panel referenced two standardized measures of fluency: The Gray Oral Reading Test (Weinerholt and Bryant, 1992) and a standardized measure of the speed of reading of single words. Both of the recommended standardized measures seem to have limitations. The Gray Oral Reading Test is based on norms that are over a decade old. Using the reading of single words as a full measure of fluency seems to violate the guidelines offered by the Panel in the portion of their report in which they noted: "For example, informal reading inventories (IRI) require students to read grade-level passages aloud and silently. The teacher determines a reading level by calculating the proportion of words read accurately in the passage. To ensure that students do not focus solely on fluency—at the expense of comprehension—the student is expected to summarize or answer questions about the text" (p. 3-9). We read this statement to mean that it is important to assess a child's fluency within the context of reading comprehension. The oral reading of single words certainly does not include a measure of comprehension.

An exception to the general lack of attention afforded fluency assessment is the work of Deno and his colleagues. Deno (1985) introduced the notion of assessing oral reading fluency to the field of special education as a gauge of student progress in reading. Oral reading fluency is measured by timing a child's reading in connected text for one minute while recording errors that the child demonstrates during reading. Subsequent research on this procedure has established it as a robust way for teachers to track student reading growth, evaluate instructional program effectiveness, and predict performance on norm-referenced standardized achievement tests. While critics have argued that this type of brief measure of student reading fluency does not reflect the complex processes that represent proficient reading, oral reading fluency has been thoroughly tested for concurrent validity with other well established reading measures as well as for sensitivity to student growth across short and long periods of time (Deno, 2002). In addition to its technical adequacy, normative data on general outcome measures of oral reading fluency have been reported (Hasbrouck and Tindal, 1992) and approximate levels of performance for typical students at each grade level have been documented (Fuchs, Fuchs, Hamlett, Walz, and Germann, 1993).

Essential dimensions for the assessment of fluency include measures of

1. Oral reading accuracy
2. Oral reading rate
3. Quality of oral reading
4. Reading comprehension.

Based on the limited research on the assessment of fluency, and the construct and definition of fluency adopted in this paper, there seem to be several essential dimensions for the assessment of fluency, including measures of: 1) oral reading accuracy; 2) oral reading rate; 3) quality of oral reading; and 4) reading comprehension.

While all four of these dimensions can be evaluated informally as pointed out by the National Reading Panel, it would seem prudent to develop a fluency measure that addresses at least some traditional reliability and validity criteria. One comprehensive instrument that attempts to address all the essential dimensions of fluency and which has been subjected to extensive field-test trials is the *Leveled Reading Passages (LRP) Assessment Kit* (Houghton Mifflin, 2001). This instrument provides the materials and descriptions of procedures that allows for the assessment of a full construct of fluency for students who are at the very beginning stages of reading through sixth grade. The *LRP* was field tested in a study of 1200 students across the United States. The field tests validated the decodability and the level of difficulty of the reading passages and word lists that are part of the instrument. Field-test data were also used to establish benchmarks of below-level, on-level, and above-level performance for oral reading accuracy, oral reading rate, quality of oral reading, and reading comprehension. Thus, the *LRP* addresses all the essential dimensions of fluency, capitalizes on the established strengths of informal assessment, but then uses actual field-test data to address the validity of the instrument.

CONCLUSIONS

While the construct of fluency may have been neglected in the past, it is receiving much deserved attention presently. There is a very strong research and theoretical base that indicates that while fluency in and of itself is not sufficient to insure high levels of reading achievement and comprehension, fluency is absolutely necessary for that achievement and for comprehension. While fluency is most obviously reflected in oral reading, it more importantly operates in silent reading as well. 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 description of the

stages of word recognition explains how readers come to recognize words by sight through carefully processing print.

Substantial research has also been conducted on how to best 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 reading comprehension. However, students who are non-achieving 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 the repeated reading of familiar texts, coached or assisted reading, and the chunking of texts are all effective techniques for helping struggling readers to improve their fluency.

Little research is available to guide the assessment of fluency. While more research is needed on 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 good agreement that these dimensions of fluency must be assessed within the context of reading comprehension. Fluency without accompanying high levels of reading comprehension is simply not adequate.



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