Fluency: The Bridge from Decoding to Reading Comprehension

John J. Pikulski and David J. Chard

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 limited the 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.

**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.

**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.

**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).

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 assist 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**

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.

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). 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 1,200 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 ensure 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.

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.

Authors

Dr. John J. Pikulski is Professor of Education at the University of Delaware, where he has been Director of the Reading Center, Department Chairperson, and President of the University Faculty Senate. His current research interests focus on strategies for preventing reading problems and the teaching and developing of vocabulary. An active member in the International Reading Association, Dr. Pikulski has served on its Board of Directors, chaired various committees, and was president of the association in 1997–98. He is coauthor of The Diagnosis, Correction, and Prevention of Reading Disabilities and Informal Reading Inventories. Dr. Pikulski is also a senior author of Houghton Mifflin Reading, and is a coordinating author on Reading Intervention for EARLY SUCCESS™.

Dr. David J. Chard is Associate Professor at the University of Oregon where he also serves as Director of Graduate Studies in Special Education. His research and teaching interests focus on early literacy and mathematics instruction for all students, including those with learning disabilities and those at risk for school failure. Currently, Dr. Chard is the principal investigator on two federal research projects on mathematics and reading comprehension instruction in the primary grades. He has published extensively on instruction interventions, improvement of teacher development programs, and word recognition processes in reading development. Dr. Chard is an author of Houghton Mifflin Reading, and is a consultant on Houghton Mifflin Math.