Reading Fluency: Neglected or Corrupted?

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In 1983, Richard Allington described fluency as the "neglected reading goal." Less than 20 years later, reading fluency was enshrined as one of the "five pillars" of reading instruction (National Reading Panel, 2000). The dramatic increase in the status of reading fluency has been nothing short of a phenomenon. But is the reading fluency described by Allington in 1983 the same as the fluency encased in the five pillars? Or, has reading fluency been corrupted to mean something quite different? We believe it is the latter. We argue in this paper that there are really two competing conceptions of reading fluency in the literature and that one is coming to dominate over the other. One conception of fluency (i.e., the emerging dominant view) is focused solely on automaticity, and the other conception (i.e., the diminishing view) includes attention to prosody as a significant aspect of fluent reading. We are troubled that these different views are not discussed openly in the literature but are hidden inside the illusion that theorists have reached some consensus on fluency. Further, we argue that the shifting view of fluency toward automaticity is changing the nature of classroom assessments used to guide teaching in ways that were never envisioned in the early fluency research. We have organized our examination of fluency around two major sections. In the first section we explore the construct of fluency and the teaching of fluency as represented in the reading research literature. In the second section, we report our inspection of a set of published assessment tools to reveal the prevailing ways in which fluency is measured, interpreted, and used to guide instruction.

RELATED LITERATURE

Prior to the 1970s, the term fluency was used generally to describe the quality of oral reading in subjective, non-technical terms. "Fluent reading is reading that sounds good." Harris's (1970) classic text on the teaching of reading includes an early definition of oral reading fluency as reading that "proceeds smoothly and rhythmically. Words are grouped in phrases, and meaningful thought units are indicated by appropriate pauses and inflections of the voice" (p. 169). The Stahls (2004) seemed to capture the uncertainty evident in early conceptions of fluency with the statement: "To some degree, we know it when we see it, but we don't know, yet, how precisely how to define it" (p. 39).

In subsequent decades, the terms fluency and "fluent reading" took on more specific qualities. Early theoretical speculation surrounding fluency seemed to suggest that the development of automaticity in decoding formed the basis for fluent reading (LaBerge & Samuels, 1974; Samuels,

1985, 2002). Following this interpretation, measures of rapid letter naming and word identification could be used as estimates of fluency. Researchers expanded this view to consider fluency in terms of a reader's progress in accuracy and rate of reading connected text. Norms were developed to describe progress inclusive of oral and silent rates (Harris & Sipay, 1990; Carver, 1990).

The "intuitive"/common sense use of the term fluency as expression, while perhaps not at odds with conceptions that relied heavily on measures of rapid word identification and/or words read per minute, was not exactly the same. Schreiber (1980, 1991) argued that the construct of fluency was better understood as a mapping of the reader's knowledge of the prosodic features of oral language onto the task of reading than as a simple outcome of the development of automaticity in decoding. Fluency is more complex than just reading accurately and quickly. The linguistic knowledge specific to the development of fluency includes the understandings and skills associated with the use of pitch, stress, and juncture to interpret meaning. Schreiber speculated that good reading involves the application of this linguistic knowledge to the task of reading. Schreiber's perspective on fluency and prosody was consistent with earlier research conducted by Clay (1971). She analyzed the oral readings of seven year olds focusing on their use of pitch, stress, and juncture. "High progress" readers, she discovered, had more effective control over these systems than "low progress" readers.

This prosody version of fluency did not question the accuracy and rate components but added to them. The prosody version received positive attention among reading researchers and educators alike. Indeed, Allington's (1983) description of fluency as the neglected goal in reading instruction was tied directly and explicitly to the prosody view. Researchers began to explore ways to expand assessment tools that would be sensitive to aspects of fluency that were beyond accuracy and rate. Rubrics were introduced as a tool to assess fluency levels. Aulls (1978) was one of the first to propose a specific rubric to measure reading fluency that was considerate of prosody. Others followed (Allington & Brown, 1979; Hoffman & Crone, 1985; Hoffman, Roser, & Worthy, 1998; Rasinski, 1985; Stahl, Heubach, & Cramond, 1997; Zutell & Rasinski, 1991). Instructional procedures were researched that focused directly on the development of prosody (for a summary of these procedures, see Rasinski & Hoffman, 2003).

In 1995 a team of researchers working with the National Assessment of Education Progress (NAEP) conducted a special assessment of the fluency of 1,000 fourth-grade students who previously had taken the reading achievement assessment (Pinnell et al, 1995). Their assessment of fluency was considerate of the reader's expressiveness, phrasing, and accuracy. They found that the fourth-grade students who read orally with the greatest fluency tended to score highest in overall reading achievement, and those who read with the least fluency tended to have the lowest level of reading achievement. By the mid-1990s, there appeared to be a general consensus among reading educators that (1) fluency is an important dimension of reading development; (2) fluency is conceptually tied to the understanding and use of language prosody; and (3) fluency measures should attend to accuracy, rate, and expression. We refer to this as the "prosody" perspective on fluency.

Attention to the automaticity view of fluency, found in the early work of Samuels, did not disappear with the rise of the prosody view. In fact, the automaticity view not only survived, it thrived—particularly in the context of special education research. Pikluski and Chard (2003) credit Deno (1985) with the introduction of assessing oral reading fluency to the field of special education as a gauge of student progress in reading. Following Deno's model, oral reading fluency is measured by timing a child's reading in connected text for one minute while recording the child's errors. There is no attempt in this model to measure prosody or expression but still the term fluency is used. Indeed, in most of the empirical fluency studies in special education the dependent measures tend to focus on low-level aspects of reading as rapid letter naming without explicit attention to the domain of expression in reading (see Fuchs et al, 2001; Wolf & Kazir-Cohen, 2001).

The National Reading Panel (2000) acknowledges the confusion surrounding the use of the term fluency.

> There has been a high degree of overlap in the use of terms such as "automaticity" and "fluency." Most scholars treat automaticity as the more general term that embraces a wide variety of behaviors, ranging from motor skills such as driving and typing to cognitive skills such as reading. Some would prefer to reserve the term "fluency" for reading or other language phenomena. This distinction, however, is not universally recognized. For example, *The Literacy Dictionary* (Harris & Hodges, 1995) defines "fluency" as "freedom from word identification problems that might hinder comprehension . . ." whereas, in the same source, "automaticity" is defined as "fluent processing of information that requires little effort or attention." In other words, automaticity and fluency are often used synonymously (p. 24). The NRP report continues with minimal attention to prosody as a feature of fluency. In fact, there is an emerging view, noted by Chard (2006), that expressive reading is a by-product or outcome of automaticity—"...a consequence of fluency rather than a component."

The automaticity view of fluency is most recently represented in a study reported by Schwanenflugel et al. (2006). These researchers report a study that explores the connection among measures of rapid word identification, reading fluency (defined in terms of Words Correct per Minute) in connected text, and reading comprehension. They claim support in their data for a "simple reading fluency" model that features automatic word identification as the primary factor in predicting reading comprehension levels. In other words, there may be no great advantage of calculating fluency in connected text over speed of word recognition in predicting reading comprehension. Interestingly, there were no measures of prosody included in the Schwanenflugel et al. (2006) study of fluency.

Two recently published books on the topic of fluency seem to illustrate the absence of attention to the prosody in the discussion and measurement of fluency. The International Reading Association has recently published a book entitled: *What Research Has to Say About Fluency Instruction* (Samuels & Farstrup, 2006). A close reading of this volume and this research reveals that the fundamental differences associated with the role of prosody in fluency are barely addressed or discussed. Only

two of the ten chapters discuss prosody as a significant component of fluency. Rasinski offers a thoughtful, historical review of fluency research that includes significant attention to prosody as a critical feature. Allington goes so far as to claim that fluency is "expression" and that the version of fluency he wrote about in 1983 has gone missing. Two of the chapters in this book (Torgesson & Hudson's) mention prosody but quickly dismiss it as either an outcome of automaticity or as a proxy for comprehension. The six other chapters in this book offer no significant attention to prosody as a component of fluency. This is a book that claims to represent current theory and research on fluency yet hardly presents a balanced or critical view.

Another recent edited book focused on fluency instruction, (Rasinski, Blachowicz, & Lems, 2006), continues to obscure the differences and tensions between the automaticity and prosody views. Mostly, the chapters sit inside one view of fluency or the other without mentioning alternative perspectives. Only Mathson, Allington, & Solic (2006) focus on the conflicting representations of this research literature. They make the claim that reading fluency has been "hijacked" by those who advocate a focus on rate and accuracy. They make claims that the privileging of the automaticity perspective is leading to assessments that are less than responsive to learner needs.

METHODS

Classroom Assessments of Reading Fluency

Are these two interpretations of reading fluency just "playing semantics" and/or "playing academics"? Or, are there real consequences for classroom instruction in the reshaping of fluency toward an automaticity view? We believe there is substantial evidence that the impact of the automaticity view on instruction has been substantial and is growing. With the emphasis on "scientific" research in the No Child Left Behind Act of 2001 and The Early Reading First Program, fluency instruction has become high stakes and is quickly finding its way into classrooms. Which version of fluency? To answer this question we examined the differing conceptions of fluency in a set of widely used assessment tools. We have focused on assessment tools with the understanding that in our current political climate what is tested is what gets taught. We gathered a set of popular assessment instruments (as represented in most cases in the number of published editions). We focused on assessment tools that require learners to read aloud from passages provided (i.e., connected text). We focused on inventories that guided the test administrator in the interpretation of learner performance through the quantity and quality of errors or miscues.

Our analysis focused on the following targeted areas: We looked broadly at the conception of fluency. Is fluency defined? Is rate measured? How are the prosodic aspects of fluency assessed? The results of this analysis are presented in Figure 1. Here, we summarize the findings from this analysis in terms of attention to rate and fluency. We also offer an analysis of changes across editions in several of the instruments.

Figure 1. Reading Inventories and Fluency

Instrument	Is fluency defined?	Are rate and accuracy measured?	Is prosody attended to in any systematic way in the measurement of fluency?
Applegate, D., Quinn, K., & Applegate, A. (2004) *Critical Reading Inventory: Assessing students' reading and thinking.* Prentice Hall.	Fluency is defined in terms of rate, accuracy and expression.	Accuracy, yes. Rate and Expression can be assessed.	Yes, through a rubric. Fluency should be assessed at the instructional level only.
Bader, L. A. (2005). *Bader Reading and Language Inventory. (5th Ed.)* Upper Saddle, NJ: Pearson.	Defined in terms of a lack of fluency especially whispering, pausing, rereading, and word-by-word reading.	Accuracy, but not rate.	Marked during oral reading (hesitations and ignoring of punctuation) if there is time.
Beaver, J. M. (2001) *Developmental Reading Assessment. (K-3) (2nd Ed.)* Parsippany, NJ: Celebration Press.	Good readers Read aloud in meaningful phrases with appropriate expression. (They) read at an appropriate reading rate with a high percent of accuracy.	Accuracy and rate (Total number of words read * 60 divided by number of seconds).	Rating rubric (includes the word phrasing).
Flynt, E. S., & Cooter, R. B. (2004). *Reading Inventory for the Classroom.* Upper Saddle River, NJ: Pearson.	Charts and a procedure to assist in determining the reading fluency rate of your students are included in this edition.	Accuracy is calculated. Rate (Oral Fluency Rate) norms are given but procedures for assessing rate are not included in the protocols.	A (four level) fluency rating scale is provided. Neither the rate assessment nor the fluency rating is used to determine the assignment to a level of text.
Good, R. H. (2003). *DIBELS: Dynamic Indicators of Basic Early Literacy Skills. (6th Ed.)* Longmont, CO: Sopris West Educational Services	The term fluency is connected to almost all aspects of performance (e.g., letter naming fluency, initial sound fluency, word use fluency, and oral reading fluency.	Accuracy and rate (number of words read correctly in one minute averaged across three passages).	No.
Leslie, L.., & Caldwell, J. (2006). *Qualitative Reading Inventory.4.* Boston: Pearson.	Fluency not mentioned—automaticity is described at the word level and sentence level	Accuracy and Rate (words per minute and correct words per minute options).	No.
Silvaroli, N. J., & Wheelock, W. H. (2004). *Classroom Reading Inventory. (10th Ed.)* Madison, WI: McGraw Hill.	Mentioned.	Accuracy Only. Rate is mentioned but not measured.	Mentioned but not measured.
Stieglitz, E. L. (2002). *The Stieglitz Informal Reading Inventory. (3rd Ed.)* Boston, MA: Allyn and Bacon	Not mentioned.	Accuracy Only.	Not mentioned or measured.
Woods, M. L., & Moe, A. J. (2007). *Analytical Reading Inventory. (8th Ed.)* Upper Saddle, NJ: Pearson.	Fluency refers to the reader's automatic control of text, taking into consideration phrasing, pitch, stress and intonation.	Accuracy is measured, but not rate.	Fluency is measured through a four point rating scale. Fluency is not used to determine a reading/passage level for the reader. Accuracy is used.
Wiederholt, J. L., & Bryant, B. R. (2001) *Gray Oral Reading Test.* Austin, TX: ProEd.	No.	Accuracy and rate are measured	Not discussed, but there are provisions to document the lack of expression and poor phrasing.

Defining fluency. Decisions surrounding whether and how to define fluency and how to approach rate and accuracy varied in the different assessment tools we examined. Fluency is mentioned in the *Classroom Reading Inventory* (Silvaroli & Wheelock, 2004), but it is not measured. The *BADER Reading and Language Inventory* (Bader, 2005) describes fluency only in terms of a "lack of fluency" (e.g., word by word reading). For all practical purposes, fluency is equated with rate of reading (speed) and accuracy in the *Dynamic Indicators of Basic Early Literacy Skills* (*DIBELS*) (Good & Kaminski, 2003).

Fluency is described at length and in more qualitative terms in the other inventories. For example, the *Critical Reading Inventory* (Applegate et al., 2004) makes specific citations to work of Allington and others. They provide a rubric designed " . . . to help users assign a numerical value to a reader's fluency" (p. 27). The fluency rubric is applied only at the student's reading of instructional level text. The *Developmental Reading Assessment K-3* (Beaver, 2001) presents a fluency rubric for the evaluator to follow. The *Developmental Reading Assessment 4-8* (Beaver & Carter, 2003) also provides a formula that determines "Oral Reading Fluency" rate, defined as accessing . . . the deeper meaning of the text. Slow and/or choppy reading, even at high levels of accuracy, is not good reading. Good readers read in longer, meaningful phrases with effective expression that reflects the author's intended message. They also read quickly and smoothly" (p. 46). The *DRA 4-8* also provides for "possible interventions" to increase Oral Reading Fluency. However, the prosodic elements of performance are not used to make placement decisions in text. These decisions rest on accuracy and rate.

The *Reading Inventory for the Classroom* (Flynt & Cooter, 2004) describes "reading fluency rate" as a way of indicating ". . . whether a student is focusing more on word recognition or comprehension" (p. 9). The inventory provides the following descriptions regarding how to represent the "general fluency" (p. 15) of the student:

"Word by Word—Reads in a slow, labored, word-by-word fashion. Fairly long pauses between words, may exhibit little awareness of syntax, and/or decoding is obviously difficult.

Mixed Phrasing—A mixture of some word-by-word reading and reading fluently in one- or two-word phrases. May show attention to syntax and punctuation. Decoding is sometimes automatic and other times more labored. Punctuation is often ignored.

Fluent Reading—Reads mainly in fluent phrases with good expression. There is good attention to syntax and punctuation. Decoding seems to be automatic."

Reading rate. Important differences also exist in the position these inventories take regarding rate. The *Reading Inventory for the Classroom* (Flynt & Cooter, 2004) requires that an administrator determine a Reading Fluency Rate for students by calculating the average number of seconds required to complete the oral reading of all passages (independent and instructional) levels and converting that average to average words read per minute. The inventory provides a table for administrators to determine if a student is reading within his instructional reading level.

The *Developmental Reading Assessment 4-8* (Beaver & Carter, 2003) offers a formula for determining the oral reading fluency rate by first finding the words read per minute and then using the following range table to find the student's reading rate: "slow" (less than 80 wpm); "moderate" (80-99 wpm); "adequate" (100-125 wpm); and "very good" (greater than 125 wpm).

The data on reading rates by grade level are based on a study reported by Harris and Sipay (1990). Applegate et al. (2004) mention rate but seem to prefer that the test administrator focus on the qualitative aspects of fluency. "Teachers using the CRI can easily evaluate fluency in a qualitative manner by taking anecdotal notes during the student's oral reading. Particular attention should be paid to the reader's expression, phrasing, and attention to punctuation during oral reading. CRI users can also time oral reading and compare a reader's rate to well-established average reading rate tables (Harris & Sipay, 1990, p. 634)." (p. 27). The *QRI* (fourth edition) offers the administrator the option of calculating rate using the Words per Minute guideline or the Correct Words per Minute approach. Separate tables are provided for interpretation. The argument is made that the CWPM approach includes attention to accuracy and rate.

Comparisons over time and editions. An examination of earlier and current editions of informal reading inventories reveals shifting attention to fluency. The first edition of the *QRI* (Leslie & Caldwell, 1990) mentions automaticity and places it under word identification. Automaticity is measured through the word list reading only (automatic vs. decoded). There is no mention of fluency, and there is no calculation of rate in connected text. The *QRI II* (Leslie & Caldwell, 1995) adds the calculation of reading rate in connected text to the estimate of automaticity. Tables are provided for the interpretation of rate. Rate measures and automaticity are still placed as a sub area of word recognition. No major changes are offered in the *QRI III* (Leslie & Caldwell, 2001) with respect to automaticity. The *QRI IV* (Leslie & Caldwell, 2006) introduces the alternative of measuring rate using WPM (words per minute) or CWPM (correct words per minute). The authors state: "...if the purpose is to identify a student's instructional level, WPM will suffice...If, however, the assessment focuses on a student's ability to handle it at his or her chronological grade level, CWPM might be more appropriate." (p. 82)

In the Bader (1983, 2nd edition) the author states "...examiners may obtain a rate-per-minute estimate by using a stopwatch to time the student's reading and dividing time into the total number of words (exclusive of the title) listed at the end of each page. However, most examiners would probably do better only to note extremely fast or slow reading." (p. 10) There is no mention of fluency. The Bader (2005) includes rate norms but still cautions against the use of these norms as there is such variation in rate.

There is no calculation of rate in the earlier editions of the Flynt/Cooter inventory. Rather, a fluency rubric is used to estimate fluency. In the new (1st edition of the *Cooter/Flynt/Cooter Comprehensive Reading Inventory* (2007), fluency is discussed as part of the NRP's "big five" in reading instruction. This edition contains the rubric for describing "general" fluency (word by word, mixed phrasing, and fluent reading), but there is also a rate measure calculated that relates to WPM. Interestingly, the table presented for interpretation of rate is described in terms of CWPM (correct words per minute) from Hasbrouck and Tindal (2006).

While there are exceptions, the patterns across these assessment tools suggest a movement toward the measurement of rate as critical and further toward the measurement of rate that includes attention to accuracy (WCPM). Attention to prosody, if included, is optional and resides in the qualitative analysis section. Prosody is seldom considered in the decision making related to scoring or continuation to higher levels of passages.

DISCUSSION: MUCH ADO ABOUT NOTHING?

Our analysis of the most popular reading assessment tools leads us to conclude that the automaticity view of fluency now dominates at the level of instructional decision-making (e.g., placement in instructional materials), in measuring achievement levels, and in evaluating student progress. If there is attention to prosody, it usually appears in the "qualitative" analysis section of assessment tools. We agree with Matheson, Allington, and Solic's (2006) argument that assessment instruments that claim to be measuring "fluency" (without attention to prosody) are leading instruction down a dangerous path. When only accuracy and rate "count," what messages are sent to all classroom participants regarding reading?

When and how did the automaticity view of fluency come to dominate over the prosody view? When and how did fluency come to be regarded as a by-product or outcome of automaticity? When and how did fluency measures (as in CWPM) begin to resemble measures of rapid word identification? We cannot identify a single point in time in the research literature when these shifts occurred. The NAEP data clearly suggested the significant contribution of measures of prosody to the prediction of reading, but this path has been abandoned in current fluency research. The NAEP report also demonstrated that the prosody feature of fluency could be measured reliably. The National Reading Panel Report certainly had an influence on narrowing the perspective to automaticity along with research from special education. The NCLB and Reading First requirements for "scientific evidence" from experimental studies has certainly privileged the automaticity view. At the surface level, "reading rate" may appeal to researchers in terms of ease of measurement over "prosody." In fact, reading rate is quite challenging as a measure (see Carver, 1990), and prosody has been measured with quite sound psychometric properties (see Pinnell et al., 1995). The rise in the automaticity view, in the end, may be more the result of political rather than scientific processes. The fact that instruments like DIBELS that rely heavily on an automaticity perspective have been all but mandated in Reading First programs is evidence for the politics surrounding fluency (Goodman, 2006).

To be clear, there is convincing evidence regarding the importance of automaticity in skilled reading. There is nothing inherently contradictory in the constructs of automaticity and the prosody interpretations of fluency. Indeed, we believe these processes are complementary. Our concern centers on the rising dominance of the automaticity perspective on classroom instruction—particularly in schools serving low-income communities. These schools, supported by Reading First and under the pressure of No Child Left Behind requirements, are focusing assessments and instruction on increasing the rate of accurate reading. In the schools in which we work, it is common to observe teachers required to do "rate checks" using the same assessment instruments we have analyzed and to graph progress in reading speed and accuracy with no attention to expression or comprehension. In these same schools, parents are being trained with charts to record accuracy and speed in homework reading. There is clear evidence that these same practices are becoming common around the country (see Goodman, 2006).

Rasinski (2003), an advocate for a prosody view of fluency, cautions against focused instruction on isolated components (like rate) as contrasted to approaches that encourage attention to all of the components as they interact (e.g., Stahl, Heubach, & Cramond, 1997). Rasinski recommends the use of poetry and readers theater as powerful interventions for building fluency. These approaches

encourage attention to accuracy, rate, and prosody together. In contrast, by encouraging students to ignore expression in order to read faster, the automaticity perspective invites the use of texts (both as assessment tools and as materials for practice) that are devoid of meaning. The DIBELS goes so far as to measure the "fluency" (i.e., rate) of reading nonsense words. An emphasis on "reading" nonsense words discourages thinking in reading. An emphasis on "reading fast" discourages students from attending to meaning as they read and discourages the use of self-monitoring and fix-up strategies such as re-reading text. Tierney and Thome (2006) make a strong claim that assessments like DIBELS are narrowing our conception of literacy and leading us down a "wrong path" for instruction.

The automaticity view of fluency and the prosody view support very different models of instruction. As a field, we should not hide behind the illusion that any attention to fluency is a good thing when differing views of fluency shape instruction in fundamentally different ways. The first step is for researchers to be clear in their use of terminology. If, as we suggest, there are competing views, then these differences must be addressed. If there is a case to be made that prosody should not be included in measures of fluency, then the burden is on those who subscribe to this view to present their evidence. There is clearly a need for research that examines the relative merits of each perspective in explaining reading development. Further, the impact of the resulting models of instruction must be examined to determine the impact on student achievement.

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