REVIEW of RESEARCH in the CLASSROOM

Reading Fluency: The Road to Developing Efficient and Effective Readers

Helen R. Abadiano

Jesse Turner

Central Connecticut State University

The New England Reading Association Journal Call for Papers poses five essential questions on reading fluency: What does fluency mean? How is fluency assessed? What is the connection to phonics and reading instruction? What is the research on which it is based? What are the ways in which teachers are addressing fluency in the classroom?

In this article, these questions guide our reflective examination of issues and concerns surrounding the notion of reading fluency in this article. We also present you with three research articles that we found helpful in addressing some of these same issues and concerns. These are: (1) *The effect of instruction and practice through Readers Theatre on young readers' oral reading fluency* by Susan Keehn (2003); (2) *Fluency and comprehension gains as a result of repeated reading: A meta-analysis* by William J. Therrien (2004); and (3) *Using paired reading to enhance the fluency skills of less-skilled readers* by Sandra L. Nes (2003). These research studies extend our views on reading fluency and lead us to the identification of effective instructional approaches to developing reading fluency in classrooms.

THE DIFFERING NOTIONS REGARDING THE COMPONENTS OF READING FLUENCY

The National Reading Panel (2000) emphatically articulates the growing concern that children are not achieving fluency in reading. In assessing the reading fluency of America's children, the National Assessment of Educational Progress (NAEP) (1995) found that 44% of fourth graders are lacking in reading fluency; only 28% of eighth graders, and 34% of twelfth graders achieve proficient reading standards. A staggering number of elementary, middle and high school students demonstrate difficulty in coping with on-grade level reading demands and expectations. "Struggling secondary readers often have challenges in all areas of reading: decoding, fluency, vocabulary, and comprehension" (Archer et al., 2003, p. 89). Educators and researchers purport that the development of reading fluency is a critical aspect of learning to read, and that reading fluency plays a vital role in developing effective and efficient readers (Allington, 1983; Keehn, 2003). The question is: Why do schools continue to experience problems with having students who are lacking in reading fluency?

Keehn (2003) suggests that one of the reasons why this is points to the lack of appropriate fluency instruction that "may be due to the conflicting views that exist over the role of fluency in skilled reading" (p. 40). According to Keehn (2003):

> "... Some researchers consider oral reading fluency to be an outcome of decoding and comprehension (Gough, 1972; Rumelhart, 1978), while others assert that fluent oral reading is a contributor to both decoding and comprehension (Breznitz, 1987; Briggs & Forbes, 2001). ... Fluency is sometimes defined as the ability to recognize words rapidly and accurately (e.g., LaBerge & Samuels, 1974). In other sources (e.g., Coots & Snow, 1982; Schrieber, 1987) fluency is defined in terms of the connections readers make between the natural phrasing in speech and the phrasal segmentation in oral reading. Notions

of fluency have also been expanded to include the suprasegmental features of prosodic reading performance. In the latter definition, fluency involves reading with intonation and expression (e.g., Clay & Imlach, 1971; Dowhower, 1987; Karlin, 1985).

... Rasinski (1986) and Lipson and Lang (1991) conclude that researchers have been too narrow in their views of fluency. The problem, Rasinski argues, is lack of awareness of fluency's complexity. He asserts that researchers have 'made the tacit assumption that each factor [i.e., rate, accuracy, phrasing, prosody] alone was responsible for fluent reading' (Rasinski, 1986, p.3). Indeed, more recently educators (e.g., Richards, 2000; Strecker, Martinez, & Roser, 1998) offer evidence to support the notion that reading fluency is a multidimensional construct." (pp. 40-41).

In addition, **The Literacy Dictionary: The Vocabulary of Reading and Writing** defines reading fluency as "freedom from word identification problems that might hinder comprehension in silent, or the expression of ideas in oral reading; automaticity." Harris and Hodges (1995) define it as: "A reader whose performance exceeds expectation with respect to age and ability; an independent reader; any person who reads smoothly, without hesitation and with comprehension." (p.85) It is observed that in some definitions of reading fluency, comprehension with automaticity is loosely included, even if occasional reference is made to a fluent reader as also an independent reader. However, definitions of reading fluency that explicitly address comprehension of text being read—that automaticity without comprehension does not meet the reading fluency standard, came much later. Harris and Hodges' (1995) definitions include fluency as an aid to comprehension, as well as an acknowledgement of a fluent reader as an independent reader who comprehends the text he [she] reads. The peril of excluding comprehension in the definition of a fluent reader is that a reader who reads a text with appropriate speed, accuracy and expression still may not understand the text. The assumption that reading fluency is limited to speed, accuracy and expression can lead to a focus on only speed and accuracy in reading instruction. We submit that fluency without comprehension is merely an oral performance that does not lead to meaning construction. A more pragmatic explanation of reading fluency must include comprehension or one that strongly acknowledges a critical link to comprehension. The latest conceptualizations of fluency extend beyond word recognition processes and include comprehension processes.

In thinking about these differing notions of reading fluency, a critical question emerges: How do they impact literacy curriculum and instruction?

A case in point is the debate between phonics and meaning-based reading instruction. One can argue that if the two key foundations for fluency are accuracy and automaticity, it follows that without phonics instruction these two components of fluency would be lacking, and readers would not be able to process written text.

A counter-argument is that while speed and accuracy have traditionally been considered the hallmarks of fluency, these are insufficient and that readers need to also learn to monitor their reading by checking for meaning—asking the three cue questions,: Does this make sense? Does this word look right? Does this sound right? These three questions help readers connect to meaning through accessing the three basic reading cues—meaning, syntax and visual (Clay, 1979). One would be hard pressed to find reading instruction these days without an emphasis on phonemic awareness, phonological awareness, accuracy in decoding and on producing three cue readers. An important reason as to why fluency is again receiving increased attention is the assumption that increased amounts of decoding instruction would automatically lead to improved fluency (Allington, 1998). However, we know this is not necessarily true.

> ... Phonics alone is insufficient to developing fluency.... Regardless of the label, the goal of reading instruction is to help children learn and use the alphabetic principle—the understanding that there are systematic and predictable relationships between written letters and spoken sounds. Knowing these relationships will help children recognize familiar words accurately and automatically, and decode new words (**Partnership for Reading 2001: Put Reading First**, p. 12).

The National Reading Panel Report (2000) states: "Fluency depends upon well developed word recognition skills, but such skills do not inevitably lead to fluency" (p. 3).

WHAT RESEARCH SAYS ABOUT DEVELOPMENT and ASSESSMENT OF READING FLUENCY

Developing reading fluency

Research indicates that guided repeated oral reading procedures have a positive impact on word recognition, fluency and comprehension (NRP 2000). Research also supports the belief that teachers can help students become more fluent readers by providing them with models of fluent reading and by having students repeatedly read passages with guidance. In addition, teachers can help students improve fluency by combining reading instruction with opportunities for them to read books that are at their independent level. In *Put Reading First* (**The Partnership for Reading**, 2001, p. 26), five ways are suggested to have students read repeatedly:

1. **Student-adult Reading.** An adult models the fluent reading of the text, and then the student reads the text with encouragement from the adult. This goes on until the student is quite fluent.
2. **Choral Reading.** Students read along as a group with the help of the teacher who models fluent reading. Students reread the text with encouragement until they are fluent with the text.

(This is not done in one sitting).

3. **Tape-Assisted Reading.** In tape-assisted reading students read along in their books as they listen to a fluent reader on audiotape. This continues until the student can read the book independently.
4. **Partner Reading.** In partner reading, paired students take turns reading aloud to each other. For partner reading, more fluent readers can be paired with less fluent readers.
5. **Readers Theatre.** In Readers Theatre, students rehearse and perform a play for peers or others. They read from scripts that have been derived from books that are rich in dialogue.

In addition to Readers Theatre, Keehn (2003, p. 42) cites other methods that researchers have identified as effective in developing fluent reading:

1. **Rereading.** Students read a text repeatedly until they achieve a designated rate and then repeat the process with a new text (Samuels, 1979).
2. **Modeling.** Students benefit from hearing models of fluent, prosodic reading in addition to having opportunities for rereading.
3. **Explicit Instruction.** "Instructional attention to the aspects of fluency can build students' metacognitive awareness of fluency production. As Aulls (1982) states, 'in order to break out of word-by-word reading and to begin to group words, beginners must be aware that it is possible to read in some other way than word by word' (p. 348)." (p. 42)
4. **Manageable Text.** Students practice oral reading fluency with texts that "fit" their reading level. Its only when readers can read the materials with ease do they have the opportunity to develop fluency.

The impact of Readers Theatre on the development of oral reading fluency of young readers is documented in Keehn's (2003) *The effect of instruction and practice through readers theatre on young readers' oral reading fluency.* Keehn compares the difference in treatment effect when Readers Theatre was implemented in two ways as an instructional intervention to promote oral reading fluency in second grade classrooms over nine weeks during the third quarter of the school year. Three questions were asked: "(1) What is the effect of rereading, modeling, and use of appropriate text via Readers Theatre on second graders' oral reading fluency? (2) Does explicit instruction in fluency add to students' growth in oral reading fluency? (3) Does fluency instruction increase the oral reading fluency and the reading comprehension scores of students at different levels of reading skill in different ways?" (p. 43) Readers Theatre is one of the methods researchers have found as effective in developing fluent oral reading—rereading, modeling, explicit instruction, reading in manageable texts, and Readers Theatre. (p. 42)

Keehn (2003) describes the participants in her study as four second grade classrooms selected randomly in a rural school district in central Texas with second grade teachers whose teaching experience ranged from five to ten years. All classrooms used the same basal reading series, participated in the Accelerated Reader Program, were read to daily by their teachers and allowed at least 20 minutes for independent reading. None of the four teachers had implemented Readers Theatre in his [her] classroom prior to the study. The materials included assessments of reading level (i.e., Leslie and Caldwell's Qualitative Reading Inventory, 1990; Gray Oral Reading Test, revised by Wiederhold & Bryant, 1985), measures of comprehension (i.e., retellings using Morrow's guidelines for administration of retellings, 1989 and Irwin & Mitchell's holistic evaluation, 1983), measures of oral reading fluency (i.e., NAEP's Oral Reading Fluency Scale, 1995; Martinez, Roser & Strecker's Diagnostic Fluency Assessment, 1999), script preparation using readability measures (i.e., Fry's readability formula, 1968 and Rosenblum, Gansler and Frank's RightWriter computer software, 1990). In this study, two of the four classrooms received implementation of Readers Theatre repertory groups plus weekly mini-lessons and daily coaching in strategies to increase oral reading fluency, and the two other classrooms received only implementation of Readers Theatre repertory groups, without fluency instruction. (pp. 43-45)

In the results of the study, Keehn's (2003) data show that students in both treatment groups made statistically significant growth in oral reading fluency during the nine-week Readers Theatre intervention. There was no significant growth made by the two treatment groups in terms of rate, accuracy, retelling, fluidity, phrasing, expressiveness, or overall reading ability. All children, regardless of reading ability, made growth through the intervention of purposeful rereadings via Readers Theatre. (pp. 49-50)

Keehn (2003) argues for Readers Theatre as a viable vehicle for oral reading fluency. The repeated readings with the Readers Theatre format also helped second graders develop word recognition and comprehension. The children even averaged a 30 word per minute increase in rate from a first reading on Monday to the "performance" reading on Friday. (p. 52) However, the children's growth in oral fluency did not benefit much from the explicit instruction in fluency. The findings support the suggestion that "rereading in text that fits is the critical factor in fluency improvement." (p. 52)

Therrien's (2004) study compliments Keehn's (2003) research. In *Fluency and comprehension gains as a result of repeated reading: A meta-analysis,* Therrien examines procedures used to increase reading fluency. His study raises three questions (p. 253): (1) Is repeated reading effective in increasing reading fluency and comprehension? (2) What components within a repeated reading intervention are critical to the success of the program? (3) Do students with cognitive disabilities benefit from repeated reading?

To answer these questions, Therrien follows six-

steps—forming eligibility requirements for the studies that would be considered for the review; locating 33 articles that met the criteria; reviewing these articles to determine if they were amenable to meta-analysis methodology; reviewing the remaining articles to determine which effect size calculation would allow as many of the studies to be analyzed as possible; calculating for fluency and comprehension effect sizes; and coding effect sizes to allow the studies to be analyzed, i.e., intervention length in sessions, population (students without disabilities, students with cognitive special needs, or both students with and students without disabilities), dependent variable type (fluency or comprehension), and repeated reading intervention components. (p. 254)

Although Therrien's study has a few limitations—it did not specify the reading material used during intervention, the comprehension component in a transfer repeated reading intervention was not included, and effect sizes in the analysis were based on differences between pretest and posttest scores, the findings significantly "confirmed previous findings that repeated reading improves students' reading fluency and comprehension." (p. 258) Samuels (1979), Meyer & Felton (1999) and the National Reading Panel (2000) are among those that promoted repeated reading in improving students' reading fluency. Therrien's study also succeeds in delineating "essential instructional components to include within a repeated reading program. ... If repeated reading is intended to improve students' ability to read and comprehend a particular passage (i.e., nontransfer), students should be cued to focus on speed and comprehension and the passage should be read aloud three to four times. If repeated reading is intended as an intervention to improve students' overall reading fluency and comprehension (i.e., transfer), there are three essential components: Passages should be read aloud to an adult, corrective feedback on word errors should be given, and passages should be read until a performance criterion is reached." (p. 259)

Therrien's study echoes the National Reading Panel's (2000) summarized findings about guided repeated oral reading as a means to improve fluency; that both good and poor readers benefit from the repeated guided reading, although they may benefit differentially. Chard et. al.'s (2002) synthesis of the research on fluency interventions also suggests that "repeated reading interventions [particularly] for students with LD are associated with improvements in reading rate, accuracy, and comprehension. These studies, ... provide evidence that the focus on developing students' rapid processing of print by reading target passages more than once is often effective as a means to improve accuracy and speed, and ultimately leads to better understanding of text." (p. 402)

Finally, using Vygotsky's (1978) theory of development and learning as the guiding theoretical framework in a study, paired reading instructional intervention was put to test in Nes' (2003) *Using paired reading to enhance the fluency skills of less-skilled readers.* In this study, oral reading fluency—"the ability to read connected text aloud with sufficient speed and accuracy so that the words are grouped in logical units, with appropriate pausing, inflection, tone, and emphasis" (p. 182); comprehension; and accuracy were examined in the context of a paired reading instructional intervention. Participants included four students in the fourth, fifth, and sixth grades (3 boys and 1 girl) from a rural school district who were reading 1 year or more below grade placement and 35% or more below recommended minimum oral reading fluency rates. The intervention sessions occurred five days a week, on a one-to-one basis, for approximately 11 school weeks, and each session lasted for 30-40 minutes per student participant. (p. 181) Nes, who served as the skilled reader (model) for each of the students, used students' self-selected trade books as the connected text for the study. (p. 182) Students' oral reading fluency was recorded as the rate of words read per minute. Accuracy was the percentage of words read correctly without omission, substitution, insertion, or miscue. Finally, a maze procedure was used once a week throughout the study to assess students' comprehension of the connected texts read. (p. 182) The study also included three major phases: baseline—baseline fluency and accuracy data were collected for each participant prior to the paired reading instruction in order to set the criterion level for the initial treatment phases for each student; intervention (divided into sub-phases)—uninterrupted continuous reading of connected text from trade books beginning with a discussion/review of the previous story events; and maintenance—paired reading fluency rates and accuracy percentages were probed five times for each student in order to examine the lasting effect of the intervention and the stability of the results over time. (p. 183)

As a result of the paired reading intervention throughout the study, all participants in the study substantially increased their reading fluency rates, accuracy levels remained high and stable, increasing reading fluency did not have a detrimental effect on their accuracy, and comprehension results remained very high and stable. (p. 185)

These results are consistent with other research findings on the value of paired reading intervention in developing reading fluency (e.g., Rasinski & Fredericks, 1991; Li & Nes, 2001). The unique characteristics of the paired reading instruction—positive one-to-one interactions between skilled and less skilled readers, promotion of reader engagement, extended practice, concrete evidence of progress, and reader voice in selection of interesting materials can effect rapid turn-around in reading fluency for less skilled readers. (p. 187)

Assessing fluency

With the current extreme emphasis on high stakes assessment one must begin any assessment dialogue with a clear understanding of balanced assessment. Teachers are overwhelmed by the never-ending demands of

implementing assessments in classrooms. Oftentimes, the value of assessment, which is to determine what children know in order to scaffold their learning, is overlooked.

An example of balanced assessment of fluency is demonstrated at the Central Connecticut State Literacy Center. By balanced assessment we mean:

> A photo album of performance over time. Such an album includes classroom based daily performance of students, alternative assessments as well as authentic assessments. There are formal, informal, and differentiated assessments. Norm reference tests are included with criteria reference assessments. Individualized assessments, motivation and effort put forth by the student are also included. There are notational observations by teacher, student's grade point average, along with teacher, student and parent reflections and goals. Balanced assessment portfolios provide a clear, unobscured picture of the whole child from multiple perspectives.

Within a balanced assessment framework fluency becomes one part of a child's assessment portfolio that is measured over time. Balanced assessment is not an attempt to add on to a teachers' load, rather, it is a means for teachers to better understand how instruction and assessment are driven by growth using multiple measures. Unfortunately, many standardized measures are not sensitive enough to capture the small, but essential victories made by children who struggle with literacy that are often evident within classrooms. Balanced assessment empowers learners, parents, teachers, and schools to consider progress over time. It enables teachers to use multiple measures of success or failure to construct changes in their instructional delivery. The ability to evaluate and use all the data collected is essential to quality teaching. Using multiple measures allows teachers to triangulate data. When multiple measures point to success the course can remain the same, but when they differ then we need to begin to question results. This means that teachers need to increase emphasis on progress monitoring. When multiple assessment measures indicate failure across the board this is a clear indication for a need to rethink, adjust, and change our instructional delivery. Anything less is malpractice. Learning in our schools has to be driven by progress. Children deserve schools and classrooms that are data driven.

Reading fluency can be measured through oral reading

According to Schudt-Caldwell and Leslie (2005), authors of the Qualitative Reading Inventory, readers require three things to be fluent.

> First, they must have a large store of sight words, those that are automatically recognized from memory. Second, they must have effective strategies for analyzing unfamiliar words. And third, they must understand the purpose of reading is comprehension, which allows them to read with expression. (p. 76)

"Rate" can be added as a fourth component that reading specialists measure in assessing fluency.

Schudt-Caldwell & Leslie (2005) note that readers read with expression, because they comprehend what they are reading. Indeed, fluency has an important influence on comprehension; that is, to experience good comprehension, the reader must first be able to identify words quickly and easily (Samuels, 2002). Some components of fluency are measured by isolated assessments such as word lists, decodable texts, and other standardized assessments but these provide incomplete snapshots of reading fluency.

To properly assess reading fluency, Goodman, Watson & Burke write that readers should read an entire cohesive text (story, poem, article, chapter, etc) that is both of interest to the student and well written (1987) (p.38). Regardless of text length the reader needs to read a complete text to enable him [her] to construct meaning. For most teachers, assessing fluency begins with collecting oral reading samples via running records. Reading teachers record readers reading appropriate level texts noting their miscues/errors, self-corrections, rate and intonation followed by a retelling. This type of assessment is followed by an analysis of the assessment data that monitors individual progress, and determines where reading instruction should go next. As reading professionals and teachers begin to assess fluency a clear picture begins to emerge. Non-fluent readers need to spend a significant portion of their time identifying individual words that they rarely have enough attention left over to focus on a text's meaning (Adams, 1990; LaBerge & Samuels, 1974; Perfetti, 1985; Stanovich, 1980). This agrees with what Reutzel (1996) identifies as "at-risk indicators" for oral reading fluency—slow, labored pace; poor flow or continuity, indicated by pauses, false starts, and/or regressions; and poor phrasing, evidenced by choppy reading, improper stress and/or intonation.

On the other hand, fluent readers read at an appropriate rate, use punctuation, have high rates of accuracy, and read with expression. One quick way to measure accuracy and rate is to use acceptable benchmarks.

At Central Connecticut State Literacy Center, we use two tables to get a quick snapshot of children's fluency before we begin analyzing their running records (*see Tables 1 & 2*).

Table 1.
ACCURACY

Independent Level	Instructional Level	Frustration Level
98% accuracy	90 to 97% accuracy	Less than 90% accuracy

From: QRI-3, 2001, pp. 68 & 64. Addison Wesley Longman, Inc.

Table 2.
TYPICAL ORAL READING RATES by GRADE LEVEL

Grade One	30 - 70	Grade Four	90 - 140
Grade Two	50 - 100	Grade Five	100 - 150
Grade Three	70 - 120	Grade Six	110 - 150

From: Barr, Blachowicz and Katz' **Reading Diagnosis for Teachers**, 2002, p. 25.

It is important to understand that accuracy is only one aspect of reading. The use of miscue analysis provides teachers with a clear opening picture of oral reading.

Screening for fluency requires both informal and formal assessments. Checking fluency for a large number of students requires use of screening checks, and should also include reading whole texts, because readers need meaning in the texts to read with expression. The accuracy and rate tables along with information from a retelling can provide initial data and a rich insight into the reader's ability to read fluently. Teachers can stop collecting data on fluency when a reader is reading independently across texts.

CONCLUSION

Fluency with comprehension is and should be a primary goal in our literacy instruction. It is critical to keep in mind that fluency is part of the reading process that leads to effective and efficient readers. In our review of various research studies a number of instructional approaches have been found to have positive impact on students' development of fluency. Repetitive reading interventions and Readers Theatre are among these instructional strategies. However, we found limited descriptions of the motivational context of the recommended repetitive reading engagements or the specific materials used in these studies. The same is true with Readers Theatre. The National Reading Panel reports that research lacks attention to motivation factors. We believe that motivation and the type of materials used to motivate repetitive readings and Readers Theatre play a prominent role in developing fluency. Teachers should always take into consideration the materials and procedures that motivate struggling readers in their effort to become fluent readers. More often than not, fluency development depends less on any one particular repetitive reading intervention, but more on creative, caring innovative teachers who make students' repetitive reading experiences and participation in Readers Theatre inviting, engaging and fun. Thus, future research should not only focus on empirical data, but also explore the affective experiences of readers in reading intervention programs and go beyond mere affect sizes to the heart of what motivates struggling readers.

Finally, we may differ in our views of fluency; and our assumptions about why some of our students fail to develop into fluent readers; however, we must all be vigilant of the continuing difficulties our students have with reading and continue to explore and expand our understanding of fluency in order to help our students become fluent as readers.

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