Reading Fluency and Research-Based Practices for Instruction

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Abstract

Fluency is an essential element in developing successful readers. Since publication of the National Reading Panel report in 2000 and increases in research and evidence supporting a positive correlation between reading fluency and student reading success, the impact of effective fluency instruction has become widely discussed. In this review, I will present some of the research behind the basic understandings and definitions of fluency, the impact of fluency on reading proficiency, and research-based instructional practices for developing and improving fluency. This review will not present analysis on the earlier stages of fluency development as seen in Ehri’s research on phases of sight word learning, nor, will it focus on fluency in emergent literacy. Research articles were relatively limited to studies focusing on fluency development in grades 2-4. The findings from these research articles as presented in this review, present an argument for a balanced approach to fluency development, meaning several dimensions of fluency must be addressed simultaneously for effective fluency instruction. By assessing student deficits in fluency development, instructional models can be adjusted to improve fluent reading. This review will provide examples of instructional practices for supporting fluency, but is in no way a comprehensive list of instructional strategies.
In exploring the implications of reading fluency on reading success, it is important to understand several variations on the definition of successful fluency. Reading fluency has been defined in several ways in regards to reading proficiency as a result of the various processes involved in fluent reading. According to Rasinski (2004), reading fluency refers to the reader's ability to develop control over “surface-level text processing” so that he or she can focus on understanding (comprehension) the deeper levels of meaning in the text. In Kuhn et al.’s (2010) article, four definitions of fluency were discussed. The first focused on accuracy and automaticity through phonemic awareness and letter-sound correspondence. Through automatic decoding, students can quickly and correctly identify words; however, this definition of fluency focused on “the most quantifiable elements of fluency…often at the expense of other aspects of fluent reading, such as phrasing, appropriate pacing, stress, and emphasis” (Kuhn et al., 2010). While The National Assessment of Educational Progress (NAEP) includes measurements of accuracy and rate as part of its evaluation, it also includes “phrasing, adherence to the author’s syntax, and expressiveness”, what has come to be understood as prosody “to describe those aspects of oral reading that go beyond accuracy and rate” (NAEP). It was their hope that in designing the Oral Reading Fluency Scale, the overemphasis on rate and accuracy could be balanced, by integrating oral language elements and performance. A third definition of reading fluency expressed it as skilled reading, “the ability to decode and to comprehend the text at the same time”, describing that “other characteristics of fluency such as accuracy of word recognition, speed of reading, and the ability to read orally with expression” (Kuhn et al., 2010; Samuels, 2006, p. 9) simply serve as indicators that fluency has been achieved. The fourth
definition viewed fluency as a bridge between decoding and comprehension with a reciprocal relationship existing between fluency and comprehension, “both contributing to and possibly resulting from readers’ understanding of text” (Kuhn et al., 2010). The definition in which Kuhn et al. (2010) summarizes and integrates the thoughts from these four understandings of fluency is determined as a combination of “accuracy, automaticity, and oral reading prosody, which, taken together, facilitate the reader’s construction of meaning…[as] demonstrated during oral reading through ease of word recognition, appropriate pacing, phrasing, and intonation.” It is this definition on which this review will build arguments and suggest instruction.

Even in defining fluency, a knowledge of those factors which contribute to these definitions must be explained further. According to Rasinski (2004), reading fluency has three important dimensions that “build a bridge to comprehension”: accuracy in word decoding, automatic processing, and prosodic reading. In addition to these three aspects of fluency, Hudson et al. (2005), includes reading rate in coordination with automaticity. For the purpose of this review, the discussion will focus more on automaticity and prosody.

The first dimension, accuracy in word decoding, refers to the reader’s ability to decode text with minimal errors using phonics and other decoding strategies (Rasinski, 2004). Although this review is not focused on word decoding as it pertains to phonics, accuracy, as the ability to quickly and correctly identify through instantaneous decoding of words, directly contributes to success in automaticity as will be discussed next.

The second dimension of fluency is automatic processing, or automaticity which encompasses the reader’s ability to quickly, effortlessly, and automatically decode words in the text. Fluent readers can read effortlessly, meaning they can autonomously recognize words with ease while simultaneously comprehending what they have read. They are able to recognize
words without “conscious awareness” they are doing so (Kuhn et al., 2010). The importance of automaticity is built on the research of LeBerge & Samuels (1974), which claims that this “recognition (fluency) must apply a significant amount of [readers’] finite cognitive energies to consciously decode the words they encounter while reading. Cognitive attention or energy that must be applied to the low-level decoding task of reading is cognitive energy that is taken away from the more important task of comprehending the text” (Rasinski et al., 2005, p. 22). With automaticity in word level decoding, students can apply more of their cognitive energies to higher order reading skills.

Within automatic processing, an assessment of reading rate can be associated with reading fluency. As automaticity develops, students are able to read both more accurately as well as faster. There is a positive correlation between increased reading rate and higher levels of comprehension in average and poor readers (Hudson et al., 2005), but this is not to say that speed should be the most important factor in reading fluency. Although students may read more quickly, this only addresses one measure of fluent reading. The focus on speed has been emphasized in fluency instruction; however, the understanding of it and implementation into teaching practices has been misguided. Many teachers have taken the assessment of reading rate as a measure of how quickly the student is able to correctly read a passage. According to Rasinski (2004), “this is a corruption of the concept of reading fluency.” This emphasis of speed “at the expense of prosodic and meaningful reading, we will end up with fast readers who understand little of what they have read.”

“Prosodic reading”, or reading with expression, is the third dimension of fluency and is comprised of “variations in pitch (intonation), stress patterns (syllable prominence), and duration (length of time) that contribute to expressive reading of a text (Hudson et al., 2005). Because
there seems to be a reciprocal relationship between prosody and comprehension, it is an important aspect of fluency (Hudson et al., 2005). “If readers read quickly and accurately but with no expression in their voices, if they place equal emphasis on every word and have no sense of phrasing, and if they ignore most punctuation, blowing through periods and other markers that indicate pauses, then it is unlikely that they will fully understand the text” (Rasinski, 2004). It is hypothesized, if a student is able to read with expression, they are understanding the implied meaning within the text (comprehending) (Kuhn & Stahl, 2000). Schreiber (1980), however, suggests that this link between comprehension and prosody may be a weak one. Children especially, rely on the prosodic expression in oral language to derive meaning from what is being said. Often, written language, as seen in reading, lacks many of these cues that would assist children in making meaning from the text (Kuhn & Stahl, 2000; Schreiber 1980), so readers need a model of fluent reading to truly understand the written meaning of the text. Effective instructional models for fluency support will provide students with these models of fluent reading as well as exposure to various kinds of texts, in different formats.

**Instructional Practices**

According to Rasinski (2004), many programs and materials are lacking in their focus on fluency instruction perhaps as a result of the long time association of fluency as an oral skill not one associated with acquisition of skills important to learning to read. However, as the thoughts about fluency have shifted, educators are noticing the importance and impact fluency can have on reading achievement. One of the key components of effective fluency instruction is modeling of appropriate fluency. Kuhn et al. (2010), agrees that modeling can occur through various forms of assisted, repeated, and coached reading experiences such as those in fluency-oriented reading instruction (FORI), wide fluency-oriented reading instruction (Wide FORI or Wide Reading),
and fluency development lessons. These types of fluency instructional models “view the comprehension of texts, rather than an increase in reading rate, as the primary goal” (Kuhn et al., 2010). Similarly, Rasink (2004) agrees that both repeated readings and assisted readings aid in student fluency development when coupled with coaching and emphasizes that effective fluency instruction does not require “explicit reference to reading for speed.” Approaches that encourage development of automaticity, prosody, and reading comprehension occur through various forms of supported reading that allow learners to interact with and learn from the material they are reading. Several of these approaches will be discussed in the remainder of this review.

Repeated Readings

Arguably the best known and seemingly most effective way to support fluency development is through repeated readings. Repeated readings can increase both a student's fluency and vocabulary. In repeated readings, a short passage is read several times until a “satisfactory level of fluency is reached” (Samuels, 1979). The adult may provide feedback focusing on different elements of fluency, such as word recognition, each time the text is read. The student's fluency should increase with each reading, and by the final reading, s/he should be able to read the passage aloud at an appropriate rate of fluency.

Repeated reading exercises do not have to be only an adult-child activity. Teachers can pair children together for repetitive oral reading practice. When choosing student pairs, teachers should consider student personalities as well as reading abilities. Generally, children with low fluency rates should be paired with students who are at or above grade level in their fluency. According to Rasinski (2004), developing fluency in reading requires practice, and repeated reading can provide this necessary practice.
The method of repeated reading (Samuels, 1979) developed from LeBerge and Samuels (1974) theory of automaticity. Per the theory of automaticity, because students are spending less “cognitive energy” on the lower level acts of decoding, they can focus more on comprehension which arguably would increase their prosody as well. In Samuels’ method of repeated reading, growth in fluency would be measured by reading rate and accuracy. Interestingly enough, this increase in speed will eventually plateau, as outlined in Kuhn et al.’s, description of the power law in which “speed increases throughout practice, but the gains are largest early on and diminish with further practice” Kuhn et al. (2010). As with many interventions, student progress spikes at first, and then levels out later. An argument could be made of the effects of repeated reading for long term reading goals.

Although there is noted improvement in reading when implementing the repeated reading model, Schreiber (1980) made a valid point in that this improvement cannot be solely attributed to the repetition of the text. As Schreiber (1980) and Kuhn & Stahl (2010) discussed, children are sensitive to the prosodic cues in oral expression, and these cues are often left out of written word. Based on these findings, I would infer repeated readings are not responsible for an increase in prosodic reading. Students need a model of reading with expression that repeated reading cannot provide. Students are focused on accuracy and rate in repeated readings, and although these attributes may improve, if they are only repeating their readings with the same lack of expression, prosody will not improve. Furthermore, as Schreiber outlines in On the Acquisition of Reading Fluency, the repetition of the same passages may not necessarily be indicative of the same types of gains in reading speed and accuracy for new passages. Schreiber (1980) argued that “it [would] not do to say simply that there has been a generalization of habits from one set of stimuli to another, since the question remains why and how such a generalization can take
place.” Though students are successfully reading their repeated passage, unless a different text is directly connected to that text through vocabulary or concepts, as might be seen in a wide reading model, I would not expect students to be as successful at fluently reading a new passage.

It would seem that repeated reading would only improve student expressive reading if explicit feedback and modeling is given in between each reading, as Allington suggested in *Fluency: The Neglected Reading Goal*, modeling and marking phrase boundaries in the text while allowing students to repeat readings both orally and silently. This is not traditionally the way in which repeated reading is conducted, so I would assume assisted readings would be more beneficial to fluency development. Just as Kuhn and Stahl (2000) found in their research, “repetitive approaches do not seem to hold a clear advantage over non-repetitive approaches” and “assisted approaches, such as reading-while-listening, seem to be more effective than non-assisted approaches, such as repeated reading.”

**Assisted Readings**

In agreement with Schreiber, Rasinski reiterated that students need to *hear* what fluent reading sounds like and how fluent readers interpret text with their voices. Assisted readings provide students with a fluent, adult model while they read along with a passage. Carbo (1978) used her “talking books” as an intervention for struggling readers or students with learning disabilities. By providing these students with passages and books she recorded on cassette tapes using speed and phrasing appropriate for the intended reader, these students were able to make gains of on average 6 months with both word recognition and prosodic reading. In a similar study, Pluck (1995), used the “Rainbow Reading Programme” in which she also recorded books and passages on tapes for student use. In this model, students were able to listen to the tape until they felt comfortable enough to read the passage independently, as the teacher provided
feedback. Using this strategy, students were able to make on average 2.2 years in their reading level.

These two studies of assisted reading suggest that larger student gains will occur when students are supported and coached towards independence in reading as opposed to reliance on these recordings. The “Rainbow Reading Program” provided students with a gradual release and more teacher feedback than that of Carbo’s “talking books.” Concerns with these types of assisted readings that rely on repeated reading of a passage are similar to those of Schreiber (1980), with students only being able to be successful at these passages and in this type of supported instructional model. The prosodic cues are unique to each passage and cassette tape. The model of fluent reading will change each time the student selects a new text, and the syntactic clues from which meaning is derived will be different each time. These changes could expose students to the various prosodic shifts, so they can transfer and apply them elsewhere. One could also argue, that because students are being exposed to vocabulary that is then becoming part of their repertoire of known words, their automaticity could transfer to new passages and student comprehension could potentially increase.

**Choral Reading**

Similar to assisted reading, in choral reading, students are able benefit from a fluent, adult model while they practice reading aloud. Choral reading exercises can help students to develop good oral reading fluency. Choral reading can happen in a small group setting, or whole group. The students read “aloud from the same text in unison with the teacher, who models accurate pronunciation, appropriate reading rate, and prosody (expression)” (Paige, 2011). In "Whole-Class Choral Reading" (WCCR), when the choral reading has been completed, the teacher "provides corrective feedback to the class through explanation and modeling by
reviewing problematic words and phrases” (Paige 2011). Although in some WCCR exercises struggling readers may have difficulty keeping up with the pace, they can still benefit by following along, participating when they can, and hearing the text read accurately, with good pacing and phrasing (Hasbrouck, 2006). Choral reading is most effective when the students use a marker of their finger as they follow along. As Rasinski suggests, the teacher plays a key role in developing expressive, oral reading skills through read-aloud sessions and coaching in a scenario such as WCCR. Although this model of fluent reading is beneficial to readers, there is no gradual release, and students are fully relying on the adult model for reading success. This provides students with practice, however, students need to be able to read the passages fluently in the absence of their teacher model. The following instructional model, Reader’s Theatre, combines several components of effective fluency instruction to provide students with guidance and support that sets them up for independent success.

**Reader’s Theatre**

Reader's Theater can also be used in a whole or small group setting. Reader's Theater is readers reading a script or poem adapted from literature, and the audience picturing the action from hearing the script being read aloud. It requires no sets, costumes, props, or memorized lines. Instead of acting out literature as in a play, the performer’s goal is to read a script aloud effectively, enabling the audience to visualize the action. The Reader’s Theatre model focuses on reading for expression and meaning, not speed. Performers bring the text alive by using voice, facial expressions, and some gestures. It is an engaging and motivating way to help students with their fluency and comprehension. Through modeling, repeated readings, and practice, students focus on their understanding and expression of the text. As Rasinski (2004) noted poetry, scripts,
speeches, monologues, dialogues, jokes, and riddles are perfect texts for developing fluency through the Reader’s Theatre model.

Young & Rasinski (2009) implemented this model at a Title I school, in a second grade class consisting of 8 girls and 21 boys. Nine of the 29 students were ELLs. The levels of reading achievement in the class at the beginning of the study ranged from early kindergarten to midyear third grade, with the mean at approximately the end of first grade. The model followed a five day format in which the students completed mini-lessons with their scripts each day focusing on different areas of fluency and vocabulary acquisition. Friday, the students performed their scripts for their classmates. In addition to the Reader’s Theater Model, students also worked in literacy work stations each day. Because there were other literacy factors contributing to student success, the increases in fluency performance cannot be solely attributed to Reader’s Theatre; however, from the qualitative results of the study, student motivation was greatly impacted by Reader’s Theatre. The increase in motivation might also be partially responsible for increase student achievement, as intrinsically motivated students are more likely to perform well.

Although Reader’s Theatre can be motivating and increase fluency, Kuhn & Stahl (2010) caution against including poetry and other relatively brief texts, if these are the only texts that students are reading. These types of text used in isolation “will not provide learners with sufficient practice to develop their fluency, regardless of how repeatedly they are read.” That being said, Kuhn & Stahl (2010) also suggest that longer books, basal readers, and anthologies not comprise all of the guided and scaffolded reading instruction. A wide range of texts with various degrees of repetition, prepare readers best for fluent reading.

The most effective fluency instruction follows a balanced model in which each facet of fluency is developed and assessed simultaneously. Students must be exposed to a wide range of
texts, as well as differentiated instructional models. Students will make the most progress in fluency acquisition if they receive support, feedback, and modeling of fluent reading. A single measure on one aspect of fluency is insufficient as fluency is comprised of several cognitive processes that result in the expressive and accurate representation of the text. Expression and meaning should take precedence over reading rate as rate is not necessarily an indicator of student reading success and will increase naturally as the other factors of fluency improve. Because of its relationship to comprehension, fluency development should be a key instructional goal for effective reading teachers. In facilitating students fluency acquisition, educators, are encouraging their students to have more connected and meaningful experiences with the text and reading.
References


Fluency Instruction: Research-Based Best Practices is a useful resource for teachers and school district administrators working to develop reading fluency with struggling or beginning readers from child to adult learner level. Readers will acquire a sound knowledge of reading fluency theory and practice from the theoretical ideas and concrete instructions presented in the book. I strongly recommend this book, which combines the experience and research of 34 authors, as a synergistic and insightful book for a wide audience, whose readers range from those who simply have an interest in reading fluency to those who work directly with struggling or beginning readers. Improving reading fluency has been identified by the National Reading Panel as one of the five critical components of reading. A student's oral reading fluency score is measured by the number of words in a text that a student reads correctly in a minute. Measuring a student's fluency is easy. There are a number of reading fluency charts such as the one developed from the research of Albert Josiah Harris and Edward R. Sipay (1990) which set fluency rates that were organized by grade level bands with words per minute scores. The percentile on this table is a measurement based on a grade level peer group of 100 students. To provide students the opportunity to practice, fluency instruction should be with a text that a student can read at an independent level. Fluency is the ability to read a text accurately and quickly. When fluent readers read silently, they recognize words automatically. No research evidence is available currently to confirm that instructional time spent on silent, independent reading with minimal guidance and feedback improves reading fluency and overall reading achievement. One of the major differences between good and poor readers is the amount of time they spend reading. How can I help my students become more fluent readers? You can help your students become more fluent readers (1) by providing them with models of fluent reading and (2) by having students repeatedly read passages as you offer guidance. Research-Based Strategies That All Teachers Should Know. By Barak Rosenshine. This article presents 10 research-based principles of instruction, along with suggestions for classroom practice. These principles come from three sources: (a) research in cognitive science, (b) research on master teachers, and (c) research on cognitive supports. Each is briefly explained below. Fluency is also needed in operations, such as dividing decimals, conjugating a regular verb in a foreign language, or completing and balancing a chemical equation. 1. Draw a central box and write the title of the article in it. 2. Skim the article to find four to six main ideas.