

Oral Reading Fluency: A Link from Word Reading Efficiency to Comprehension

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Introduction

In today's society, it is absolutely critical that every child has the fullest opportunity to become an accomplished reader. Reading is continually debated, as the quality of an individual's life is affected by their literacy competence. The consequences of not learning to read proficiently are enormous with those failing in this regard facing personal, social and economic limitations in today's media-soaked world. In the Irish context recent concerns about standards in reading achievement (DES, 2010, 2011), the teaching of literacy (DES, 2005, Eurydice, 2011) and the performance of Irish children on international tests of literacy (OECD, 2010; Perkins *et al.*, 2010) have placed a renewed focus on how we approach the teaching of reading in our schools.

One response to these concerns has been the publication by the Department of Education and Skills of the *National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020*. This strategy identifies, among others, a revision of the English Language Curriculum as one action to address concerns about reading standards. Specifically it calls for this revision to ensure that there is explicit and systematic attention in the curriculum to the teaching of key reading skills and strategies, including phonological/phonemic awareness, phonics, word identification, reading fluency, vocabulary, and comprehension (DES, 2011).

While the focus on phonemic awareness, word identification skills (including phonics), vocabulary and comprehension are predictable and indeed crucial in this list, the inclusion of reading fluency as a key literacy skill is to be particularly welcomed. Reading fluency is an integral part of the complex reading process and while opportunities to promote this skill have long been considered central to effective early literacy instructional programmes, they are noteworthy by their absence from the revised English Language Curriculum (NCCA, 1999a). The content objectives of this curriculum (NCCA, 1999a) includes

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no reference to oral reading fluency and does not identify discrete strategies to develop fluent and automatic reading skills for primary school children (NCCA, 1999b).

This omission is atypical of content found generally in language arts curricula and is a departure from the focus of reading instruction advocated in the previous English Language Curriculum (Department of Education, 1971). This curriculum included specific reference to oral reading fluency and identified the 'cultivation of good reading habits like correct enunciation; good eye-movements; suitable speed, pitch and volume; proper phrasing and expression, etc.' (p.94) as desirable features of oral reading.

Given that the ultimate goal of reading is the construction of meaning (Anderson, Hiebert, Wilkinson, & Scott, 1985), and the positive correlation between fluency and comprehension (Pikulski & Chard, 2005) the inclusion of oral reading fluency in the recommendations of the national strategy has particular relevance in the context of addressing standards in reading achievement. This paper looks at the historical context of oral reading fluency and identifies research-based definitions of oral reading fluency along with a description of the necessary component skills. The link between oral reading fluency and the comprehension process of reading is identified along with current trends in developing children's oral reading fluency skills.

Reading Fluency: Historical Context

For years reading fluency was the forgotten element of the reading curriculum. Teachers and reading scholars were interested in readers' ability to decode words accurately, not in readers' ability to decode words automatically and quickly. Teachers and reading scholars were more interested in moving students as quickly as possible into silent reading, not the level of expressiveness that expert readers embed in their oral reading. Reading fluency was not aimed at reflecting the control of other important aspects of the reading process (Hyatt, 1943). Research in the middle of the last century sought to determine which skills were central to the reading process and which areas required further research. Oral reading was identified at this stage as an important area to be researched (Smith et al, 1952). Despite this focus however, a survey of instructional materials for primary classes from the early 1990s still found little evidence that reading fluency was more than a minor focus of instruction (Rasinski and Zutell, 1996). Research indicates that practitioners and scholars viewed comprehension in silent reading as the ultimate goal for reading instruction (Farsrtup & Samuels, 2002). Fluency was most often associated with oral reading and reading rate. Speed in reading, like oral reading, was not viewed as a priority. When reading fluency was alluded to it was in the context of elocution instruction for the purpose of oral discourse. The primary concern was not comprehension, only that the desired eloquence in reading was demonstrated.

More recently, significant advances in our understanding of reading have caused reading researchers to look more closely at reading fluency. Research in the field of literacy

education has seen a change in the role fluency has to play in the broader literacy curriculum, moving from an instructional component that was rarely encountered to one that is now central to much discourse on literacy.

A central catalyst for this change was the identification of oral reading fluency as a central component of skilled reading by the National Reading Panel (National Institute of Child Health and Human Development [NICHD], 2000). Other more recent scholarly publications and reviews have highlighted the position of reading fluency (and oral reading) in the reading curriculum (e.g. Kuhn, Schwanenflugel, & Meisinger, 2010; Rasinski, 2006; Rasinski, Blachowicz & Lems, 2006; Samuels & Farstrup, 2006).

Stanovich (1986) also contributed significantly to elevating the importance of reading fluency in an article in which he indicated a reciprocal relationship between fluency and the amount of reading in which a reader engages. He argued that readers who have achieved some fluency are more likely to engage in more extensive amounts of reading than readers who lack fluency. The latter would find reading difficult and laborious. These non-fluent readers are likely to avoid reading and fall further and further behind.

One important finding from these reviews was the indication that fluency-oriented approaches to literacy instruction are effective at increasing students' accurate and automatic word recognition, and therefore assisting with their comprehension of text (Kuhn *et al*, 2006).

What is reading fluency?

Reading fluency is an integral part of the complex reading process. The ability to read in a fluid and unrestricted manner requires the simultaneous coordination of various cognitive, linguistic and affective competencies. These competencies are typically developed in the early years of primary schooling when readers gradually learn to decode words rapidly and accurately. When reading aloud, fluent readers sound like they are talking. Their reading is accurate, quick, and has proper expression.

However, despite an increased interest in reading fluency, there remains no one agreed-upon definition for fluency. Some definitions stress the role of accuracy and automaticity in word recognition (LaBerge & Samuels, 1974; Samuels, 2002). In the *Literacy Dictionary*, fluency is defined as "freedom from word recognition problems that might hinder comprehension" (Harris & Hodges, 1995, p. 85). Meyer and Felton (1999) define fluency as the ability to read text "rapidly, smoothly, effortlessly, and automatically with little conscious attention to the mechanics of reading, such as decoding" (p. 284). Others stress the importance to fluency of the appropriate use of prosody, or spoken language features that make oral reading expressive (Allington, 1983).

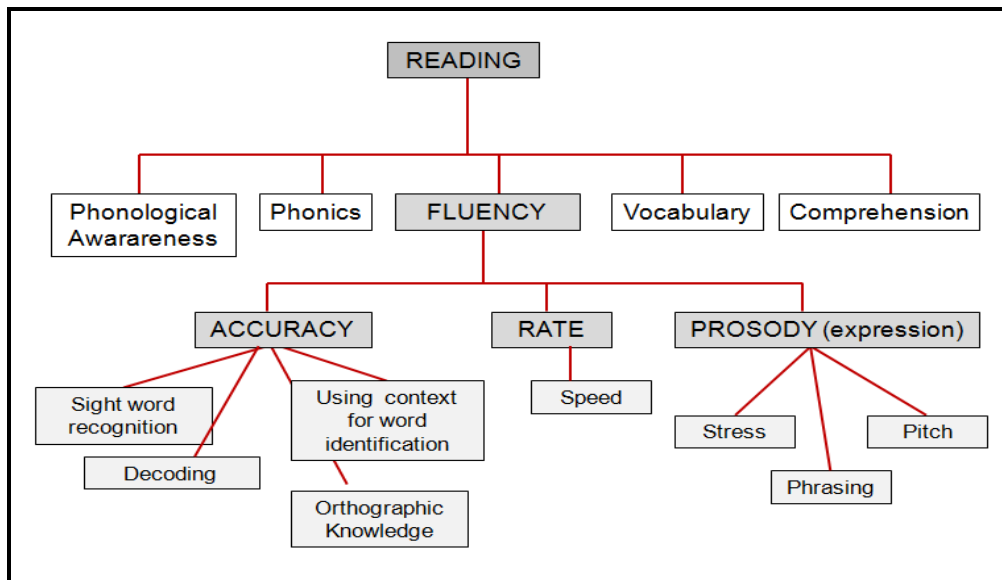
Despite the range of definitions of reading fluency, there seems to be a consensus that the construct of fluency has at least three components - accurate word reading, an efficient reading rate, and prosody (Hudson, Pullen, Lane, & Torgesen, 2009; Kuhn,

Schwanenflugel, & Meisinger, 2010; NICHD, 2000). Some definitions also include comprehension as part of fluent reading (Fuchs, Fuchs, Hosp, & Jenkins, 2001) as fluency is seen as a central factor in readers' ability to understand text (Rasinski & Hoffman, 2003).

Accuracy

The accuracy element of this construct is multi-faceted encompassing the reader's ability to decode text, to recognise words by sight or from context and the ability to use orthographic knowledge (e.g. using analogy to letter patterns in known words). In order to accurately identify words the reader must have a strong ability to blend phonemes, recognize letter strings, and understand sound-symbol correspondence (Hudson, Lane, & Pullen, 2005). This definition of accuracy in fluent reading and its location as an integral part of the reading process is depicted in Figure 1. Accuracy is necessary in the reading process because, while fluent reading does not preclude pausing to decode unfamiliar words, it is unlikely that readers will have high-level and uninterrupted comprehension of text when many words need decoding. There is rich literature about the contribution of accurate word recognition to reading comprehension (Johns, 1993) and overall enjoyment of reading (Nell, 1988).

Figure 1: Fluency as an integral part of the reading process (G.Mehigan)



However, research has also indicated that very accurate decoding of text in itself does not necessarily guarantee highly fluent reading (Pinnell et al., 1995, Kamhi et al 2001). Proficient word recognition may be sufficient to read accurately but is not sufficient to read at an appropriate rate and with proper expression (prosody).

Reading rate

The rate that readers engage with text comprises of both fluent identification of individual words and the speed and fluidity with which a reader moves effortlessly through connected

text (Rasinski, 2003). Readers move swiftly across the page leaving cognition free for comprehension (Hudson, et al., 2005). The major implication of 'slow reading' is that it necessarily results in less reading. It is also difficult for a slow reader to comprehend because the rate at which a slow reader moves through a text makes it difficult to hold on to the meaning. For instance, if your reading rate was reduced dramatically (e.g. if words were presented to you individually and at a slow and disconnected manner) it is likely that comprehension of the text would be much more challenging.

Notwithstanding the need to read at a rate sufficiently fast to facilitate comprehension, it is important that the improvement of reading rate does not become the chief goal of fluency instruction. Engaging students with regular reading exercises that emphasise speed over meaning is a corruption of the concept of fluency. There is a danger if speed is emphasised at the expense of meaningful and prosodic reading that we will end up with *fast* readers who understand little of what they have read.

Prosody

Reading prosody refers to the expressive elements of reading that include expression, intonation, pitch, tone, stress, pausing, rhythm and regularly occurring patterns in language (Allington, 1983; Harris & Hodges, 1995; Kuhn & Stahl, 2003). In order to have proper expression (prosody) the reader must have sensitivity to syntax and punctuation units. Prosodic readers demonstrate an understanding of morphemic, syntactic and semantic, and pragmatic systems to read with expression (Hudson, et al., 2005). When readers are able to apply these elements to text, it indicates that they can transfer elements that are present in oral language (speech) to print (Dowhower, 1991). This expression and intonation is also closely linked to comprehension (Goodman, 1964).

For instance consider the following unpunctuated sentence:

a woman without her man is nothing

Punctuation not only clarifies the meaning of the sentence (see below) but also the difference in meaning in the two sentences.

- | |
|---|
| <p>(a) A woman, without her man, is nothing.</p> <p>(b) A woman: without her, man is nothing.</p> |
|---|

Chafe (1988) speculates that, in order to read a sentence with intonation, one must assign syntactic roles to the words in the sentence. Given Chafe's speculation, if you read the sentence in Figure 2 below it would appear that the verb has been omitted and hence is

nonsensical. Our knowledge of syntax would lead us to expect a verb (e.g. *bought, saw, rowed, left*) after the word *man*.

Figure 2

The old man the boat.

However, if you interpret the word *man* as ‘operating or being in charge of something’, and read the sentence again it is comprehensible. This process is further helped if you read the sentence with prosody, placing emphasis on the word *old*. This example supports the view that prosody may also provide a link between fluency and comprehension.

Read and Scheiber (1982) determined that children are not only highly attuned to prosodic elements in oral language but are also more reliant on them for determining meaning than adults. Given children’s sensitivity to prosody in oral language, it seems reasonable that they are equally dependent on these features in determining the meaning of text (Allington, 1983; Dowhower, 1991). In fact, intonation, stress and appropriate phrasing are all considered to be indicators that a child has become a fluent reader (Chomsky, 1978; Rasinski, 1990)

Reading Fluency and Automaticity Theory

Any individual has limited amount of attention available for any given cognitive task (LaBerge and Samuels, 1974; Perfetti, 1985). Automaticity theory attempts to explain how people become highly skilled at complex tasks such as playing a musical instrument, driving a car or reading a book. Good teachers usually break complex skills into subskills during the developmental stages in learning a difficult skill and the learner is given instruction in how to perform the various subskills. In the early stages, while learning to perform to the level of accuracy, the student has to invest so much effort and attention into the task that only one task can be completed at a time. Anyone who has had experience in learning to drive a car will recognise this feeling. Beginning drivers typically dislike taking on another task like talking to someone else or listening to the radio when driving in traffic. In the case of reading, an individual is required to perform at least two interdependent tasks: the reader must decode the words that compose the text and simultaneously construct meaning. If you are a proficient reader you will not only read accurately and be aware of prosodic variances but also your recognition of words is automatic.

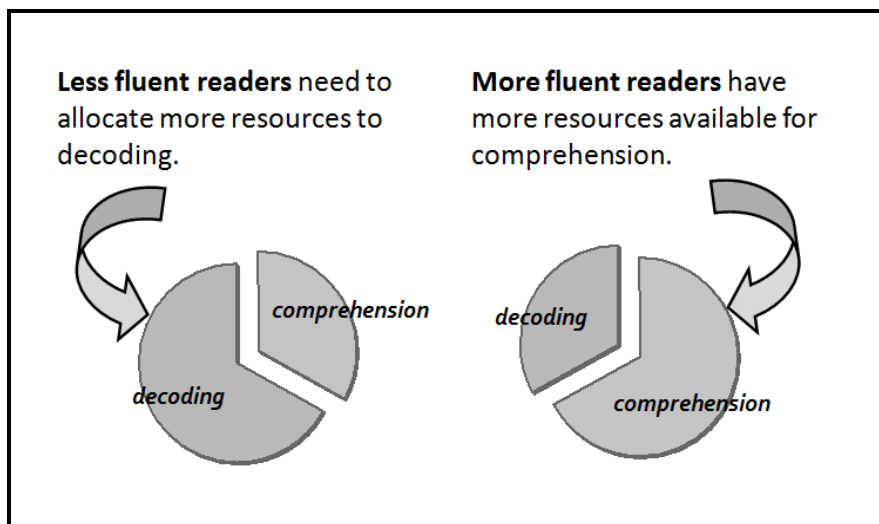
Researchers in reading were particularly interested in how this automaticity could contribute to the primary goal of reading, which is comprehension of text. A significant

milestone in this reading research was the publication of LaBerge and Samuel's (1974) theory of automatic information processing in reading. Their theory argued that the surface-level processing of words in reading (e.g. decoding syllable and word units and phrasing words together) should be achieved automatically with minimal attention to cognitive ability.

Recent research has reaffirmed this finding that automatic word reading is crucial for reading fluency and comprehension (Kame'enui & Simmons, 2001; Rasinski, 2003; Samuels, 2006; Stahl &, & Heubach, 2006). It is accepted that word recognition that is sufficiently automatic and accurate allows the mind to have more capacity for thinking and facilitates the reader's attention to be focused on the meaning of the text (LaBerge & Samuels, 1974; Samuels, 2002, 2004).

Harris and Hodges (1995) emphasised fluency's relationship to comprehension by defining it as "freedom from word identification problems that might hinder comprehension" (p.85). Poor comprehension for many readers can be explained by their having to invest too much of their cognitive resources in the surface-level aspects of reading – slow, laborious, conscious-filled decoding of words. This diversion of resources depleted those that could be invested in comprehension (as depicted in Figure 3). Conversely, as letters and later words, become increasingly familiar to the reader, less and less attention needs to be directed towards processing text at the decoding level.

Figure 3: Automaticity Theory (Interpreted from LaBerge& Samuels, 1974)

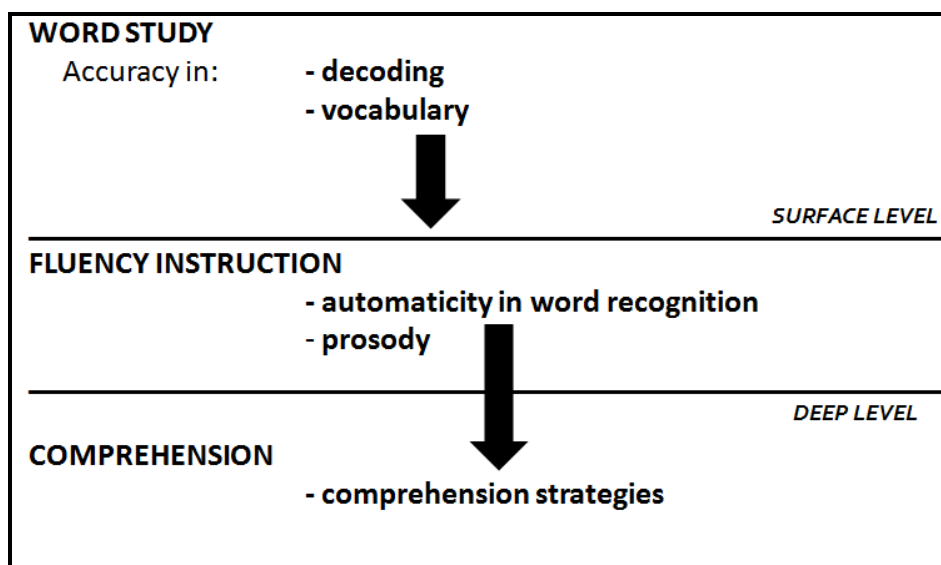


This ability to complete a process without conscious attention fulfils LaBerge and Samuels's (1974) criterion for automaticity. In this way, the automaticity theory accounts for two of the components of fluent reading: *accurate* decoding at an appropriate *rate*. Hence positing an explanation for the role of automaticity in text comprehension and so, not surprisingly, is a primary determinant of reading achievement in the primary school years.

Fluency as a factor in the comprehension process

The key player in each of the components outlined above is the notion that reading fluency is related to comprehension. The characteristics of reading fluency, effortless word recognition, reading in meaningful phrases, reading at an appropriate rate, and prosodic reading, if done automatically, allow cognition to be focused on comprehending the text (Hudson, et al., 2005). There is general consensus in reading research that the ultimate goal of reading is the comprehension or understanding of a text (Adams, 1990; Duke and Pearson, 2002; Farstrup & Samuels, 2002; National Reading Panel, 2000; Pressley, 2002). This goal, however, cannot be achieved without the reader efficiently combining a series of sub skills that define fluency as outlined here. In order to read fluently, readers need to be able to cohesively combine reading elements that ultimately allow them to obtain meaning from their text. It can be argued that fluency acts as a link between word study and comprehension. If we regard accuracy in decoding and vocabulary as *surface level* knowledge in the reading process and comprehension as *deep level* knowledge then instruction in fluency through attention to automaticity and prosody becomes the link between the two levels (see Figure 4 below).

Figure 4: Fluency: Link between word study and comprehension



Ways to Build Reading Fluency

If fluency is so important to reading success, what can be done to help students become fluent readers? Various interventions to enhance fluency often appear to take a simplistic approach to developing fluency that is summed up in the mantra: "Read, read, read". The assumption and expectation is that if students read more, they will achieve fluency. However, this answer, may not completely or adequately address the fluency needs of some

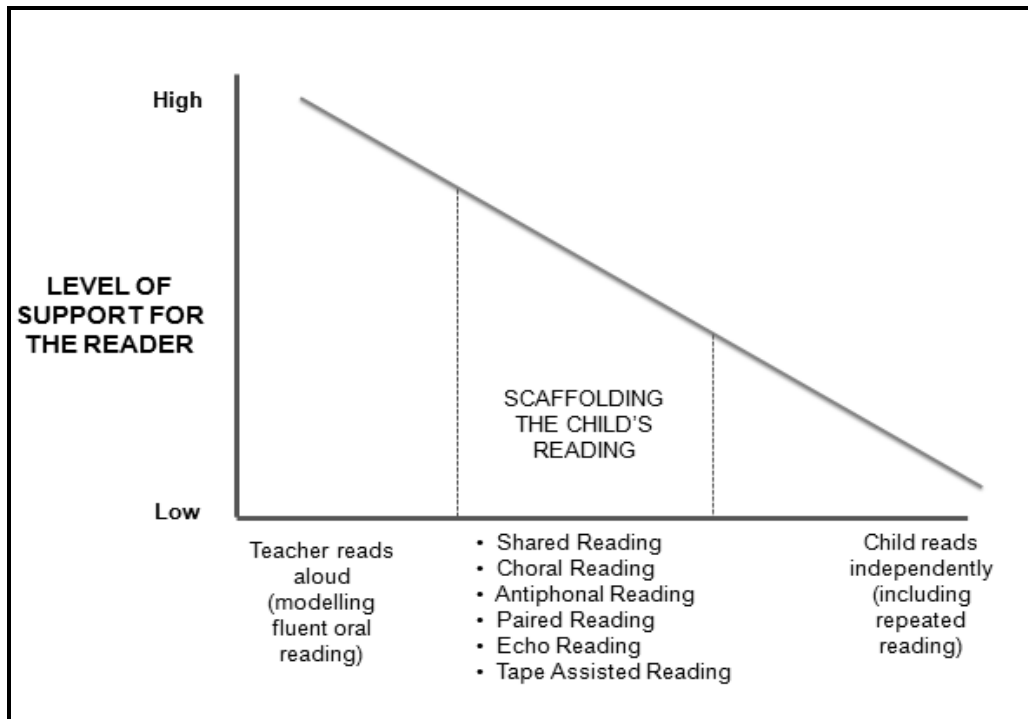
students. At least some students who lack the necessary foundations for developing decoding skills will need expert instruction and teacher guidance to progress efficiently through the stages of reading development. These students will also benefit from a fluency oriented approach to reading. Several research studies have focused on the details of instruction that seem most promising for improving reading fluency (Farstrup & Samuels, 2002; Hudson, Lane, & Pullen, 2005; Rasinski, 2003). These details include the student witnessing the reading process being modelled, being afforded the opportunity to engage in repeated reading of text and to experience a range of assisted reading fluency strategies that scaffold their reading development.

It is also accepted that reading fluency is developed through practice. With practice the reader moves from being a hesitant, word-by-word reader who reads in a halting, staccato manner to a fluent, expressive, automatic reader who understands what he or she is reading. Like any skill, it does not make sense to practice something for which you are not remotely ready. Instead, you need to find a level that allows you to improve. Naturally, it also makes sense to carry out this practice with feedback from a teacher who understands the construct of fluency. One of the most important things that teachers can do for learners who are experiencing difficulty with the transition to fluent reading is to provide them with opportunities to read (with assistance) significant amounts of connected text (Kuhn & Stahl, 2003). This is typically true of children who are making the transition from learning to read to fluency at a developmentally appropriate period (e.g. first and second class in primary school). Figure 5 depicts a gradual release of responsibility from the teacher to the child from modelling fluent reading (high level of support) to scaffolding the child's reading (moderate level of support) to the child reading independently.

Modelling is an instructional technique that teachers use to demonstrate to students how to perform an unfamiliar reading skill or strategy. "Teachers are expert readers and through modelling we show students how to perform a strategy so that students can build their own understanding of the activity" (Tompkins, 1997, p. 148). As teachers, we informally model reading strategies for students whenever we participate in literacy activities. In modelling *fluent* reading it is important that the teacher models expressive reading for the learner and help them with elements of prosody. These elements include increasing awareness of where the stress should be placed, reading with proper intonation and determining the boundaries of phrases. This will also include children listening to recordings of fluent reading for and negative examples (e.g. reading in a disfluent manner).

Scaffolded or assisted reading will include partner reading, choral reading (the teacher leads the entire class or group in reading aloud in unison), echo reading (the teacher reads a phrase, sentence, paragraph, or page aloud and then has the children chorally reread the segment) and antiphonal reading (an adaptation of choral reading where groups of children read assigned parts – sometimes alternatively, sometimes in unison).

Figure 5: Level of support for the reader in developing oral reading fluency



An important element of *independent reading* is repeated practice. Following Chomsky's (1976) work, repeated readings became a means to develop reading fluency, is still widely used and remains one of the best ways to increase reading rate and word recognition (Meyer & Felton, 1999; National Reading Panel, 2000). Repeated readings work best when the children have been provided with a model of fluent reading of the text and when support is available, often in the form of choral or assisted reading support. Repeated readings enhance understanding and lead to shared insights. The more children hear or read a story the better they comprehend it and the more they love it (Harvery & Goudvis, 2000). If students only listen to a book once they are less likely to understand everything that happens and may have questions.

Conclusion

In conclusion, reading fluency is one of the defining characteristics of a good reader. Each of the features of fluent reading can be linked to reading proficiency. While the construct of fluency may have been neglected in the past, it is now receiving the needed attention it deserves. Research on the process of reading indicates that while fluency alone will not guarantee strong reading comprehension skills, it is absolutely necessary for that achievement because it depends upon and typically reflects comprehension. Reading fluency, when taught in a structured manner, can act as a cohesive factor in building on a foundation of oral language skills, phonemic awareness and provide a link between efficient word identification skills and reading comprehension. Regardless of the method, without

adequate levels of fluency the tedious process of decoding words draws attention away from understanding. In the absence of fluency the process of decoding words uses up attention, and insufficient attention is available for comprehending texts.

The clear relationship between the amount students read, reading fluency, and reading comprehension should be all the encouragement we need as reading educators to keep reading fluency as a central element of our reading curriculum.

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