# **Clinical Forum**

# The Narrow View of Reading Promotes a Broad View of Comprehension

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n the prologue to this forum, Alan Kamhi offers an intriguing and challenging viewpoint concerning the conceptualization of reading. Those of you who are familiar with Kamhi's articles in *Language, Speech, and Hearing Services in Schools* (Kamhi, 1998, 2004) and elsewhere (Kamhi, 2003) know that he seldom shies away from controversial topics and generally has thoughtful comments to offer. However, when he first shared the narrow view of reading with me, I did not know what to think. Reading as decoding only? The idea seemed to go completely against much of what he and I had written about for the past 20 years (e.g., Catts & Kamhi, 1986, 2005; Kamhi & Catts, 1989). But I soon saw the brilliance in the idea. Rather than focusing on decoding, as I and others (van Kleeck, 2007) first assumed,

ABSTRACT: **Purpose:** This article is a response to A. G. Kamhi's proposal of the narrow view of reading.

Method: A descriptive approach is used to review research concerning the cognitive basis of reading comprehension. Educational implications for instruction and assessment are considered. The role of the speech-language pathologist (SLP) in intervention related to reading comprehension is also addressed. Conclusion: Although the narrow view of reading seems restrictive, it actually leads to a broad view of comprehension. The latter view, which is consistent with current research, proposes that comprehension is an active process in which readers use background knowledge and a range of cognitive processes to construct a coherent representation of text. This view challenges some current approaches to assessment and instruction of reading comprehension. It does not, however, diminish the role that SLPs can play in intervention related to reading comprehension.

KEY WORDS: reading comprehension, role of SLP, assessment

Kamhi's viewpoint redirects our attention to comprehension and what it will take to teach and remediate it. In fact, the narrow view of reading really promotes a "broad view of comprehension."

Kamhi's comments are especially important given the current focus on reading instruction in the schools. Traditional models of reading have conflated word recognition and comprehension. In doing so, they have led many to assume that teaching comprehension is as straightforward as teaching word recognition. Following this assumption, children are taught to comprehend text by learning and practicing a small set of rules or strategies. These strategies are often taught in reading comprehension units that are separate from the subject matter units (e.g., science, social studies) that form the content of the reading material. Such an approach is not likely to succeed because it underestimates the complexity of comprehension. Comprehension is not a skill like word recognition that can be mastered in a relatively short time, but rather a collection of knowledge and processes that takes many years to acquire. In the first part of my response, I will address some of the complexities of comprehension and their implications for instruction and assessment. I will then turn to the role of the speechlanguage pathologist (SLP) in work on reading comprehension.

#### Comprehension and Background Knowledge

The comprehension of written text is among the most complicated mental activities we engage in on a daily basis. Understanding what we read involves a host of complex thought processes including reasoning, synthesizing, problem solving, and interpretation. In fact, Perfetti (1985) likened reading to thinking guided by print. Central to our thinking during reading is our use of background knowledge. It is commonly assumed that we read to gain knowledge. However, understanding what we read actually involves more the modification of the knowledge that we already have than the collection of new knowledge (Kintsch, 1996).

Kamhi cited the work of Hirsch (2006b) in making his case for the narrow view of reading. Hirsch (1987, 1996, 2006a) has a long history of arguing for the critical importance of background knowledge in reading and school success. Hirsch proposes that "the knowledge of content and the vocabulary acquired through learning about content are fundamental to successful reading comprehension" (2006a, p. 9). He provides numerous examples that show the critical role of background knowledge in reading comprehension. A particularly powerful example is a study (Recht & Leslie, 1988) in which researchers compared the reading comprehension of students with poor decoding skills but high-level knowledge of the topic (baseball) to that of students with good decoding skills but poor knowledge of the topic. As expected, the reading comprehension of the knowledgeable poor decoders was superior to that of the less knowledgeable good decoders.

Hirsch (2006a) also proposes that it is inadequate attention to building broad content knowledge that is responsible for our nation's relatively poor reading scores as compared to those of many other countries. He also believes that limited background knowledge lies at the heart of the achievement gap between America's economically disadvantaged and advantaged children. Chall and Jacobs (2003) take this idea further and propose that it is a lack of domain-specific knowledge in many disadvantaged children that is responsible for the fourth-grade slump. They cited an earlier study (Chall, Jacobs, & Baldwin, 1990) that found that children from lowincome families performed comparably to children from higher income families on reading tests in the early school grades. However, by fourth grade, the former children began to perform less well on reading measures involving word meaning, and by seventh grade, on measures of reading comprehension. Chall and Jacobs proposed that a lack of content knowledge may account for these developing differences. Whereas other factors (e.g., biologically based language deficits) could also account for the fourth-grade slump (Catts, Adlof, & Ellis Weismer, 2006), lack of content knowledge is certainly a possible candidate.

The problem of lack of attention to the teaching of content knowledge has actually grown in recent years. In an attempt to achieve the goals of No Child Left Behind (U.S. Department of Education, 2001), schools have focused considerable time and effort on improving (and assessing) reading in the early grades. Although most of the attention has been devoted to teaching decoding skills, there have also been some instructional efforts directed toward reading comprehension. However, rather than addressing the knowledge needed for reading comprehension, most early education programs have taught reading comprehension as a set of formal skills to be learned and practiced (Neuman, 2006; Walsh, 2003). Considerable classroom time is spent learning skills such as inferencing, summarization, and finding the main idea. I will return to the issue of strategy training below, but for now, the point I want to make is that the focus on teaching formal reading comprehension skills has often replaced the teaching of much needed content knowledge. It is not uncommon for schools to reduce the amount of time they devote to subject matters such as science and social studies in order to teach reading comprehension units (Manzo, 2008; McMurrer, 2008; Pianta, Belsky, Houts, Morrison, & NICHD Early Child Care Network, 2007; Rothman, 2005). Although the reading materials used in these units do provide some content knowledge, most are in the form of narratives and offer minimal content (Palincsar & Duke, 2004; Walsh, 2003). Also, when informational texts are included, they seldom present content in the systematic and detailed manner that is necessary to build knowledge. Rather, they tend to be isolated lessons (e.g., story of Paul Revere) that are not well integrated into broader subject matter (e.g., American history).

### Comprehension as Coherence Building

Although reading comprehension is dependent on knowledge, it takes much more than knowledge to truly understand text. Cognitive science has shown that the ability to form a coherent representation of text in memory is central to successful reading comprehension (Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007). A coherent representation combines a reader's knowledge with the information provided in the text to form a mental model of the topic. This model is organized in a way that captures the causal, temporal, or logical relationships between pieces of information (Kintsch & van Dijk, 1978; Trabasso, Secco, & van den Broek, 1984). The model is also dynamic and will change as new information is encountered and incorporated into the model. In fact, Kintsch (1988) refers to this coherent representation as a situational model to denote its dynamic nature. The important point is that understanding text is not simply remembering the content that is presented, but rather involves combining this content with past knowledge to form a durable representation that can inform future behavior and learning.

Building a coherent situational model is not a trivial task. It requires considerable attention and cognitive effort. Rapp et al. (2007) described coherence building as a delicate balancing act in which a reader allocates and reallocates attentional resources. The reader shifts attention from focusing on incoming text information, holding on to some information and letting go of other extraneous information, to making inferences based on background knowledge. Rapp et al. argued that it is these fluctuations that allow the reader to form interconnections between the informational units in text and background knowledge. Whereas this process may not always operate under the conscious control of the reader, it is a very active process that takes considerable skill.

Other models of reading comprehension stress the importance of reader characteristics and attitudes in constructing meaning. Reader response theorists, for example, argue that meaning is not in the text but is derived from the interaction of the reader and the text at a given moment in time (e.g., Rosenblatt, 1985). Reading is seen as a transactional process that blends "self and text." Reader response theorists also contend that readers often take an aesthetic stance in which they make personal or emotional connections with the text.

#### **Educational Implications**

Instruction. The above conceptualization of reading has important implications for teaching comprehension. The primary implication is that schools need to provide children with opportunities to gain broad content knowledge. Given that comprehension is dependent on this knowledge, it should not be surprising that proficiency in reading comprehension cannot be obtained without it (Hirsch, 2006b). Science, social studies, and other subject matters need to be introduced in a systematic manner from the onset of formal education. Early reading materials should contain content-rich expository text as well as narratives. Once children have acquired some skills in decoding, reading text becomes one manner in which content knowledge can be acquired. However, it is not the only

vehicle for acquiring this knowledge. Children can also learn from listening, observing, and engaging in activities related to a given subject matter. Thus, although reading is important, it should not be used in exclusion to other modalities in teaching content knowledge.

The above conceptual model also suggests that, for most children, only limited instruction would need to be provided in reading comprehension outside of its use as a manner to gain knowledge. This instruction would be focused on teaching children to "think" while reading (at least to the extent that this thinking is different from that done in other modalities). This may be where reading strategies come into play. As noted above, it is very common practice in most reading curricula to teach children formal reading comprehensive strategies. This instruction has even found its way into early basal reading materials.

What is the impact of this type of instruction on reading comprehension? There are now literally hundreds of studies that have examined the effectiveness of strategy instruction. A review of this work by the National Reading Panel (2000) concluded that strategy instruction can be effective in improving the comprehension of written text. Questions still remain, however, about exactly how strategies work and what they do for comprehension. Take for example two common strategies such as finding the main idea and summarization. Does practice of these strategies directly cause better comprehension? I rather doubt it. Finding the main idea or providing a summary would seem to be more the product of comprehension than the cause of comprehension. In order to know what the main idea is or to adequately summarize a passage, you must first understand the passage. How then could working on these strategies improve reading comprehension? It may be that strategies like these are not essential skills necessary for reading comprehension but rather activities that focus readers' attention on what is important in comprehension. As reported above, comprehension is a very active process in which the reader builds a coherent understanding of the text. Willingham (2006) suggested that what comprehension strategies may do is alert the reader to the purpose of reading. It is not just decoding words; it is building an understanding of what the author had in mind when he or she wrote the passage. In other words, using and practicing comprehension strategies may cause readers, particularly young readers, to focus their attention on looking for coherence in the passage and integrating the text with what they know about the topic. For many children, it may be this change in perspective that allows them to be more successful in reading comprehension.

One further line of research that is relevant to instruction within a broad view of comprehension concerns content enhancement (Bulgren & Lentz, 1996; Lentz & Deshler, 2004). Content enhancement is a strategic approach to content instruction in which teachers organize and present subject matter in a manner that promotes learning and generalization of knowledge. Content enhancement routines can range from the use of advanced organizers and textbook supplements to a full program of strategies designed to enhance learning. These routines have been used in a variety of content areas. For example, in recent articles, Bulgren, Deshler, and Lentz (2007) and Harniss, Caros, and Gersten (2007) showed how content enhancement routines can be used to improve history instruction. Although content enhancement routines have been developed primarily for teaching children with learning disabilities, these routines fit well within a general education model that focuses on building a coherent understanding of text/content.

Assessment. A broad view of comprehension also presents challenges for assessment. It implies that in order to measure comprehension, what we really need to do is assess how individuals differ in their ability to form coherent representations of text. However, given the role of knowledge in forming such representations, might we not end up measuring just that—content knowledge? Or are there measurable domain-general comprehension abilities? Comprehension tests often try to measure the latter abilities by using passages that vary widely in content. However, this does not eliminate content as a variable. Clearly, there will be huge individual differences in the situational models that readers form from these passages, and much of the variability in these models will be due to differences in background knowledge. Some comprehension tests like the Qualitative Reading Inventory-3 (Leslie & Caldwell, 2001) take background knowledge into consideration by asking content questions before formal assessment. However, these questions are so general that they tell us little about how children might really differ in what they know about the topic. Others have suggested that we might be able to examine domaingeneral comprehension abilities by looking at the variability in the processes or thinking that readers go through as they read and try to understand a passage (Kucan & Beck, 1997; Laing & Kamhi, 2002; Trabasso & Magliano, 1996). In this work, a think aloud procedure is often used in which readers describe their mental operations as they read. Such assessment can tell us how readers analyze, reflect on, and remember what they read. However, what readers know about the topic may still overshadow our ability to uncover consistent domain-general comprehension differences between readers. Further work is clearly needed to determine if and how we can assess domain-general reading comprehension.

#### **Implications for SLPs**

The narrow view of reading (or broad view of comprehension) in no way negates what Alan Kamhi and I have argued for over the last 20 years (Catts & Kamhi, 1986; Kamhi & Catts, 1989). That is, SLPs have much to offer in terms of the early identification and treatment of reading disabilities. The view presented here does highlight, however, the need for SLPs to be aware of the importance of domain-specific knowledge and the cognitive processes that are involved in coherence building. Many SLPs do address these issues by using curriculum-relevant language intervention and comprehension strategy training. Wallach, Charlton, and Christie (this issue) and Ehren (this issue) provide more details concerning the nature of this intervention.

Whereas content knowledge and cognitive processing are critical targets for intervention, the primary focus and major contribution of SLPs' work in comprehension is language. The evidence for a language basis for at least a portion of comprehension problems is without challenge (Catts & Kamhi, 2005). A large body of research now documents the deficits that children with oral language impairment (LI) have in reading comprehension (Bishop & Adams, 1990; Botting, Simkin, & Conti-Ramsden, 2006; Catts, Fey, Tomblin, & Zhang, 2002). Many of these children have problems in word reading that contribute to their comprehension deficits. However, a sizable proportion of children with LI develop good word reading skills but nevertheless have reading comprehension problems (Catts, Adlof, Hogan, & Ellis Weismer, 2005). Language deficits clearly contribute to the latter problems. One further line of research also supports this conclusion. An emerging

body of research has examined children who are labeled as *poor comprehenders* (Cain, Oakhill, Barnes, & Bryant, 2001; Catts et al., 2006; Nation, Clarke, Marshall, & Durand, 2004). These children are identified (often after third grade) on the basis of poor reading comprehension but good word reading abilities. Studies show that poor comprehenders have a host of language problems including difficulties in vocabulary, grammar, and text-level processing abilities. Interestingly, however, only a small percentage of these children have had a previous diagnosis of LI or have been seen clinically by an SLP (Catts et al., 2006; Nation et al., 2004).

Given that at least a portion of problems in reading comprehension have a language basis, SLPs should consider children who have been diagnosed as having an LI to be at high risk for reading disabilities. SLPs can also assist in the early identification of children who are at risk for reading disabilities but who do not have a clinically identified LI. As noted above, many children who experience specific deficits in reading comprehension have language problems that are less severe than or different from those who are diagnosed with LI. Research in our lab and elsewhere (Compton, Fuchs, Fuchs, Elleman, Gilbert, 2008) suggests that setting a less stringent criteria for LI can identify many of these children but will at the same time identify many children who do not develop reading comprehension problems. It is possible that in a response-to-intervention framework (Graner, Faggella-Luby, & Fritschmann, 2005), the latter children could be removed from the pool of at-risk children by short-term intervention. Alternatively, dynamic assessment may be useful in identifying children who truly are at risk for reading comprehension deficits as a result of LI. An example of an assessment that might prove useful in this regard has been developed by Peña et al. (2006). Peña and colleagues used a test-teach-retest dynamic assessment to measure the response to instruction of children with and without LI. In this assessment, children produced two narratives in response to wordless picture books. Between the two productions, participants were provided with two brief lessons (30 min each) targeting storytelling ability. The results showed that participants' response to this instruction added significantly to the prediction of group membership.

Once children are identified as being at risk for reading comprehension problems (based on language deficits), appropriate research-based intervention must be initiated. In recent years, research has identified at least two areas of language in which intervention has been shown to be effective in improving comprehension: vocabulary and narration. Most of this work has been conducted by individuals outside the field of speech-language pathology; however, SLPs may recognize the components and/or strategies that are involved in this intervention. Numerous studies have focused on facilitating vocabulary development (e.g., Coyne, Simmons, Kame'enui, & Stoolmiller, 2004; Nelson & Stage, 2007). These studies show that direct instruction of vocabulary can increase word knowledge, and in some cases, impact reading comprehension (Bryant, Goodwin, Bryant, & Higgins, 2003; Fukkink & de Glopper, 1998; Jitendra, Edwards, Sacks, & Jacobson, 2004; Kamil, 2004; Stahl & Fairbanks, 1986). In addition to the citations provided above, other materials may be helpful in planning vocabulary intervention (Beck, McKeown, & Kucan, 2002; Gillon, Moran, & Page, 2007; Henry, 2003). Beck et al. can be a valuable reference as clinicians choose target words and strategies for teaching them. Henry (2003) further offers guidance for using morphology to improve vocabulary and comprehension. Gillon et al.

also provide suggestions for vocabulary intervention that are directed more toward SLPs.

Another area of language intervention with a growing research base is intervention that is directed toward narrative text structure. Although there are various approaches to describing the text structure of narratives, there is strong consensus that narratives have components and an organizational structure that is appreciated by language users (Applebee, 1978; Ukrainetz, 2006; Westby, 2005). Research has shown that narrative structure can be explicitly taught and that such instruction can improve narrative comprehension (e.g., Boulineau, Fore, Hagan-Burke, & Burke, 2004). Most of this work has been done in the early school grades. However, several studies suggest that such instruction can also assist adolescents with reading comprehension (Faggella-Luby, Schumaker, & Deshler, 2007; Gurney, Gersten, Dimino, & Carnine, 1990).

It is most likely that intervention in other areas of language can also positively impact reading comprehension. For example, intervention directed toward grammatical comprehension and/or text-level processes would seem to have the potential to influence text comprehension. For instance, poor comprehenders should benefit from direct instruction in how temporal (then, when, before), causal (because, so, as a result), or adversative (but, though, although) sentential structures function to convey meaning (Paul, 2007). Text-based language structures such as those that signal order (first, next, finally), clarification (in other words, that is) or summation (in summary, in conclusion, taken together) would also seem to be good targets for intervention. Cheryl Scott (this issue) argues in more detail for the importance of this type of language intervention. However, unlike for the areas mentioned above, we do not have a research base to guide us in intervention in this area.

In summary, the narrow view of reading is actually a broad view of comprehension. This view redirects our attention to the complexities of comprehension and the challenges that must be faced in instruction, assessment, and intervention in this area. It alerts educators in general to the importance of domain-specific content knowledge and the complex cognitive processes that are involved in reading. In doing so, it does not, however, reduce the significance of the contributions that can be made by SLPs to reading comprehension. Language deficits clearly impact reading comprehension, and SLPs can play a central role in the early identification and treatment of these deficits.

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