Purpose: In this initial article of the clinical forum on reading comprehension, we argue that reading comprehension is not a single ability that can be assessed by one or more general reading measures or taught by a small set of strategies or approaches.

Method: We present evidence for a multidimensional view of reading comprehension that demonstrates how it varies as a function of reader ability, text, and task. The implications of this view for instruction of reading comprehension are considered.

Conclusion: Reading comprehension is best conceptualized with a multidimensional model. The multidimensionality of reading comprehension means that instruction will be more effective when tailored to student performance with specific texts and tasks.

P roficient reading comprehension is one of the most important goals of our education system. Considerable federal and state funding has been directed toward research and practice in an attempt to increase achievement in reading comprehension. Despite this effort, 64% of fourth graders and 66% of eighth graders are still reading below the proficient level on national assessments (The Nation’s Report Card, 2016). Furthermore, recent results from the Program for International Student Assessment indicate that American children are losing ground in reading comprehension compared with children from other countries (Heitin, 2015). The reasons for this poor performance are complex and involve a host of influences including political, economic, educational, and conceptual factors. One factor that contributes to this problem is the view that reading comprehension is a single ability that can be assessed by one or more general reading tests and improved by a small set of strategies or educational approaches. Whereas many researchers and practitioners recognize at a conceptual level (and sometimes at a practical level) that reading comprehension is multidimensional, it is common practice to study, assess, and/or provide instruction as if reading comprehension was a single entity. As researchers, we are certainly guilty of this in our own work (e.g., Catts, Bridges, Little, & Tomblin, 2008; Clark & Kamhi, 2014), and many others are as well (e.g., Cain & Bignell, 2014; Gilbert, Goodwin, Compton, & Kearns, 2014).

Our purpose in this clinical forum article is to remind speech-language pathologists (SLPs) and educators of the multidimensional nature of reading comprehension and highlight the implications this multidimensionality has for instruction. Although teachers and special educators usually have the primary responsibility for instruction in reading comprehension, SLPs’ language expertise makes them especially well suited for playing an important role in improving students’ reading abilities.

Reading comprehension is one of the most complex behaviors that we engage in on a regular basis. The extent of this complexity has been recognized in the literature for some time (e.g., Kintsch & van Dijk, 1978; Lipson & Wixson, 1986) and was summarized nearly 15 years ago by the RAND Corporation Reading Study Group (Snow, 2002). This federally funded group conceptualized reading comprehension as the combination of three elements: the reader, the text, and the activity or purpose of reading. The reader brings a set of cognitive-linguistic abilities, motivations, interests, and background knowledge to the task of reading. Readers vary considerably in these factors, and this variability affects comprehension (Cain, 2010; Language and Reading Research Consortium & Logan, 2016; McNamara, Floyd, Best, & Louwerse, 2004). Text refers to a set of variables that includes such factors as genre, topic, complexity, and form (e.g., electronic vs. paper), each of which imposes its own set of constraints/challenges on comprehension (e.g., see McNamara, Ozuru, & Floyd, 2011). The notion of multiple-texts has recently
The standardized reading comprehension measures included the Gray Oral Reading Test–3 (Wiederholt & Bryant, 1992), Peabody Individual Achievement Test (Dunn & Markwardt, 1970), Qualitative Reading Inventory–3 (Leslie & Caldwell, 2001), and Woodcock-Johnson III Tests of Achievement: Passage Comprehension (Woodcock, McGrew, & Mather, 2001).

1In this clinical forum article, we refer to poor readers as those who typically perform poorly on standardized tests of reading comprehension. Similarly, good readers are those who typically score well on these measures.

2The standardized reading comprehension measures included the Gray Oral Reading Test–3 (Wiederholt & Bryant, 1992), Peabody Individual Achievement Test (Dunn & Markwardt, 1970), Qualitative Reading Inventory–3 (Leslie & Caldwell, 2001), and Woodcock-Johnson III Tests of Achievement: Passage Comprehension (Woodcock, McGrew, & Mather, 2001).

Because reading comprehension depends on the interaction among reader, text, and task factors, it is much more fluid than typically thought (Pearson, Valencia, & Wixson, 2014). With certain texts and tasks, poor readers1 can perform better than good readers. For example, ask a good reader to read a passage and answer open-ended questions on a topic she or he knows nothing about and a poor reader to take a multiple choice exam about a passage she or he knows a great deal about; the poor reader is likely to perform better (e.g., Recht & Leslie, 1988). This is just one example of how variable reading comprehension can be. Due to this variability, reading comprehension cannot be reduced to a single score nor significantly improved with a general instructional approach.

The best evidence of the variability of reading comprehension comes from the study of standardized reading tests themselves. For example, Keenan and Meenan (2014) compared the performances of approximately 1,000 children on four standardized tests of reading comprehension.2 They found that the median correlation between the different tests was only .54. This is a surprisingly low correlation given that these tests purported to measure the same thing. In addition, they reported that the average consistency between two tests in diagnosing a comprehension problem was only 43%. Some of this variability is likely to be the result of inconsistency in how and when assessments were administered. However, these assessments also involve different reader, text, and task interactions. For example, some tests are more influenced by word recognition ability, whereas others are more subject to reader differences in working memory and language (Cutting & Scarborough, 2006; Keenan, Betjemann, & Olson, 2008). In addition, test passages vary in their topic content and require different sets of background knowledge (Compton, Miller, Gilbert, & Steacy, 2013). These and other factors can lead to considerable variability in reading comprehension not only across readers but within readers (Kulesz, Francis, Barnes, & Fletcher, 2016; McElrath, Compton, Catts, & Language and Reading Research Consortium, 2016; McNamara et al., 2011). Given the variability in reading assessments alone, it is not hard to imagine how much variability there is among all the possible reading activities that require comprehension. Lipson and Wixson (1986) recognized this 30 years ago and argued that it was more important to assess how children performed in different reading situations than to try to differentiate good and poor readers on a single measure of reading that ignores its complexity.

**Instructional Implications**

The variability of comprehension means that instruction will be more effective when tailored to students’ abilities with specific texts and tasks. This instruction would involve identifying educationally relevant reading comprehension activities and directly addressing the component skills and knowledge bases involved in these activities. For example, within the language arts curriculum, children might be asked to read a passage and evaluate the arguments made by the author. This task obviously involves reading comprehension. However, it is best addressed not by teaching a general reading comprehension strategy, such as finding the main idea, but by specific strategies involving how to identify a claim, evaluate the evidence, and consider the bias of both the author and the reader. These strategies may, of course, differ somewhat depending on the specific discipline involved in the argumentation (e.g., Goldman et al., 2016). The effective use of the strategy will also depend on the reader having sufficient knowledge of the discipline (Willingham, 2006).

A similar approach would be taken to help children with the comprehension activity of retelling a narrative or writing a book report. In this case, students in the early school grades might be taught how narratives are structured and how to use mnemonics to help with retrieval. Older students could be taught about characterization and plot development or how authors use particular styles and points of view to tell stories. Of course, these are not completely novel suggestions; most language arts curricula provide advice and instruction concerning how to teach story structure and narration. Many SLPs are also familiar with this approach. However, the point is that instruction should be tailored to the specific text and designed to achieve the specific goals of the narrative activity involving comprehension.

A further example involves the assignment of reading informational texts and summarizing the details presented or answering questions related to the texts. As students progress through school, their ability to demonstrate understanding of informational texts becomes an important indicator of academic success. To assist children with such assignments, they need to be taught specific strategies related to summarizing or answering questions. But in addition, they will often need to be provided with...
more information about the topic. Content knowledge is critical to understanding informational texts, and children in the same class can vary widely in what they know about a given topic (McNamara et al., 2004). To improve comprehension, texts should be supplemented with other sources of print and digital information as well as videos (e.g., YouTube videos) and enactments or demonstrations of content (e.g., science experiments) that are specific to the topic of concern. Reading informational texts is about knowledge acquisition, which means that the emphasis should be placed on helping children acquire more knowledge. Again, it is only when the reader has sufficient knowledge that specific reading strategies can effectively aid reading comprehension (Willingham, 2006).

Whereas we have argued that instruction for reading comprehension will be most effective when the specific text and task are considered, SLPs and other educators should also continue to target word-level reading, when indicated. Research clearly shows that improving the accuracy and/or fluency of word reading positively affects reading comprehension (National Institute of Child Health and Human Development, 2000). Also, as noted herein, background knowledge is critical to comprehension. Supplementing texts with other sources of content, as we have suggested, can aid comprehension of specific texts, but it cannot address the large differences in knowledge among readers in later grades. Therefore, it is important that rich content knowledge be provided in the early school grades in order to prevent and/or limit the growing knowledge gap across grades. Hirsch (1988, 2016), and others (e.g., Willingham, 2006) have argued for years about the importance of teaching content knowledge as a means of improving reading comprehension. The Knowledge Matters Campaign is a recent effort challenging educators, policy makers, and parents to take an active role in promoting literacy by early instruction of science, social studies, and the arts (Knowledge Matters Campaign, 2016). Robert Pondiscio, Executive Director of the Campaign, argues quite convincingly that reading comprehension is not a skill but a condition we create by providing students with adequate knowledge and subject matter expertise (Pondiscio, 2014).

SLPs in particular are well aware of the importance of language knowledge for reading comprehension. The literature in speech-language pathology provides countless examples of procedures and strategies to embed language instruction in activities related to reading comprehension and academic performance (Ehren, 2002; Wallach & Butler, 1994; Westby, 2012). It is unfortunate that the benefits of language instruction on reading comprehension, though promising, have not always been straightforward to document. For example, several recent intervention studies have found that improvements in language led to less than optimal gains in reading comprehension (Elleman, Lindo, Compton, 2009; Lesaux, Kieffer, Faller, & Kelley, 2010; Past, Language and Reading Research Consortium, & Jiang, 2016). There are many possible reasons for this limited impact, but primary among them is the mismatch between what is taught and what is measured by standardized reading tests (i.e., the typical outcome variable). Standardized tests represent a particular instance of text and task, and thus do not necessarily match up with the instruction provided. The effects of language instruction as well as background knowledge are more likely to be seen in curriculum-based measures that relate to the texts and tasks used in the classroom.

Conclusion

In conclusion, we have argued that the widely accepted multidimensional view of reading means that reading comprehension varies as a function of reader ability, text, and task. Due to this variability, reading comprehension cannot be reduced to a single ability or improved with general instruction. Instruction will be more effective when tailored to students’ abilities with specific texts and tasks and when adequate content knowledge is available.

References


