CHAPTER 1

Using Text Analysis Tools to Match Readers to Texts

Match: to fit together, to harmonize with
—WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY

In matching readers to texts, teachers are hoping to create not only a good fit between text and reader but also harmony—a pleasing arrangement. An appropriate match will make the difference between a child becoming a confident, skilled reader or a frustrated, declining reader. In fact, research indicates that when readers spend a great deal of time reading appropriate texts, they will become fluent, acquire more words, and exponentially increase their skills (Stanovich, 1985). Conversely, when they do not read a great deal or do not have manageable books, they will increasingly fall behind their peers (Stanovich, 1985). The more that children read, the better they get; the better they get, the more they are able to read.

So important is matching readers to texts that Allington (2005) has identified this instructional process as one of the missing pillars of effective reading instruction. Regrettably, he points out, this instructional non-negotiable has been overshadowed by other agendas. Allington writes, "All pupils need texts of an appropriate level of complexity in their hands all day long" (2005, p. 1). *Standards for Reading Professionals* (International Reading Association, 2004) emphasizes the importance of selecting materials for readers. Standard 4.1 stresses the

importance of reading specialists and literacy coaches in "assisting the classroom teacher and paraprofessional in selecting materials that match the reading levels, interests, and cultural and linguistic background of students" (International Reading Association, 2004, p. 10). The text–reader match is particularly serious for struggling readers who often receive instruction in texts that are too difficult (Allington, 2001; Atkinson, Wilhite, Frey, & Williams, 2002; Biancarosa & Snow, 2004; O'Connor et al., 2002). Sometimes struggling readers appear to plod through (or pretend to read) class novels or basals, but they will not reap instructional benefits from reading materials that are too difficult. Children instructed at frustrational levels will experience increased exasperation, destroyed motivation, and depleted self-esteem. Children who have successful and interesting experiences with books are more likely to be motivated to read again (Guthrie et al., 2006; Ozgungor & Guthrie, 2004; Wigfield, Guthrie, Tonks, & Perencevich, 2004). Children who fail to read books fluently are more likely to avoid reading. Some will never freely pick up a book in their lives. Many will personalize their reading failures, believing that they are incompetent and dull.

Another reason why text–reader matching is so important is that many elementary learners have difficulty selecting materials for themselves (Donovan, Smolkin, & Lomax, 2000; Fresch, 1995). They are often unsure of how to judge the difficulty of books and may select books that are too hard or may cling to very easy texts. Beginning readers require guidance from the adults in their lives to help them find books. In essence, matching elementary readers with texts greatly affects the educational and social–emotional outcomes for them.

ELEMENTS OF READER–TEXT MATCHING

To match a reader to text, teachers must connect information about readers with information about texts. Figure 1.1 illustrates both the text and reader factors that come together when teachers make text selections. First, a teacher must consider the reader and her abilities, motivation, and knowledge (Rand Reading Study Group, 2002). Readers will have differing reading levels, attention spans, and memory. Knowing the reading levels of elementary students is especially important because their reading abilities grow and change vastly across the elementary years. Teachers ascertain reading levels using assessments like informal reading inventories, basal assessments, standardized tests, running records, computer programs, and careful observation. Also in the elementary years, children have varying levels of attention and concentration. As readers grow and change, they can increasingly focus on more

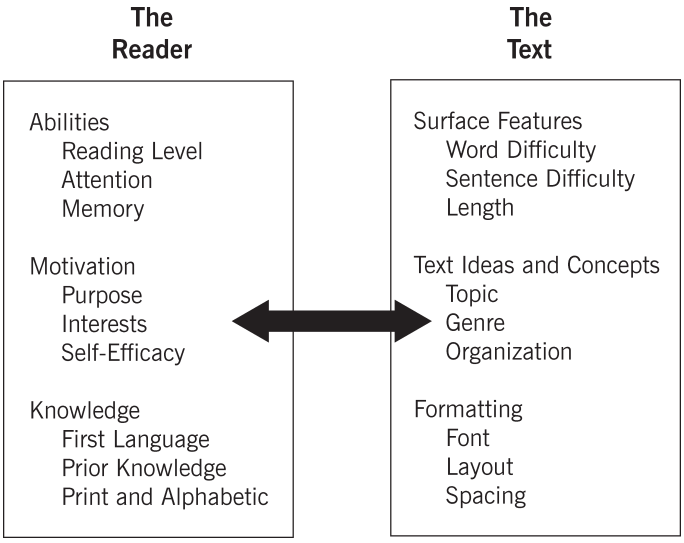

FIGURE 1.1. Text and reader factors in text–reader matching.

extended texts and persist in more challenging reading tasks. A reader's task persistence is a factor in matching him or her with an appropriate text. The reader's memory will also enter into identifying appropriate books. When readers develop a memory for larger stores of words, they can handle more difficult materials.

Although it has not received a great deal of attention, motivation is a critical reader factor (Cassidy & Cassidy, 2003; Guthrie et al., 2006). Readers' purposes will influence their motivations for reading. When readers focus on enjoyment, they read differently than if they are required to retain information from a text (Rosenblatt, 2004). When reading for enjoyment, readers are savoring the feelings, senses, or perceptions that the text offers. When reading to acquire text information, they are visualizing, note taking, and prioritizing information in text. Interests will also carry weight in text–reader matches. Often readers can handle texts that are a little more difficult if they have a keen interest in the topic. Materials that do not coincide with readers' interests will be more difficult. Last, readers' self-perceptions will shape their motivations. Readers who possess lower esteem will be less likely to persist in a task, even within their ability level, than readers with stronger self-images.

Readers' knowledge about language, the world, and print will impact how they interact with a text. Since 1979, the number of school-

age children who speak a language other than English at home increased from 9% to 19% of the total school-age population (National Center for Education Statistics, 2005). English language learners require special considerations because English language texts might contain unfamiliar words or difficult academic vocabulary. These children may even require materials in their native languages. Another important reader factor is background or prior knowledge. Some children come to school with many diverse experiences, rich oral vocabularies, and familiarity with books. Others arrive with far less information about how books work, far fewer experiences, and less oral language (Hart & Risley, 1995). The prior knowledge that children have will significantly affect how they read and comprehend a text. Finally, a reader's stage of development will also enter into the match. Readers who are just learning about alphabetics will require fundamentally different materials than those who are more fluent. Developmental stages of readers will shape teachers' instructional goals and thereby influence text selections. When I am working with first graders, I usually try to find books that will match their levels of alphabetic knowledge and word recognition skills. However, when I am working with intermediate readers, I look for books that will enable fluency and comprehension.

For years, educators have used the term *readability* to describe all the text features that influence how a person reads and understands a book (Chall & Dale, 1995; Klare, 1963, 1988; Harris & Hodges, 1995; Harrison, 1980; Zakaluk & Samuels, 1988). Readability may include many different features; addressed here are surface features (wording), text ideas, and formatting. Because readers must recognize words to comprehend them, word difficulty is one of the first surface features that affects readability. We know that readers must be able to recognize about 95% of the words in a text in order to independently handle and comprehend the material (Clay, 1993; Gambrell, Wilson, & Gantt, 1981). With teacher or parent support, readers should be able to recognize 90–94% of the words. Teachers must be able to forecast whether most of the words in the book will be recognizable and understandable to readers. Researchers have predicted word difficulty by considering word length, meaning, frequency, or letter–sound complexity. As detailed later, the prediction of word difficulty has a long past.

A second surface feature in determining text difficulty is sentence complexity. Usually, longer sentences that include many relationships require readers to infer more information than shorter sentences. Book length can also affect difficulty. From first to fifth grade, elementary readers transition from very focused, slow word decoding to automatic, fluent reading. They progress from books of 10 pages that combine

short sentences with supportive illustrations to books with chapters and hundreds of pages.

Anyone who has worked with a struggling intermediate-level reader knows that simply negotiating the surface features of a text is not sufficient for competent reading. The text ideas and concepts most certainly influence the difficulty of the material. At the very first level is the topic of the material. Texts focusing on complex and lesser known topics will be more difficult for students. The text's genre will also influence difficulty. Literary genres include narrative fiction, historical fiction, animal fantasy, high fantasy, science fiction, nonfiction, and poetry, among many others. Science fiction, for example, is a genre that presumes technical knowledge. If this presumed knowledge diverged from a reader's experiences, the material will be more difficult. Organization refers to the structure of a text. Simple texts possess straightforward, intuitive organizations with very few levels of organization. Complex texts can contain headings, subheadings, captions, and summaries. They may also contain chapters, indexes, glossaries, and tables of contents.

Text formatting also influences difficulty. Formatting includes fonts used, layout of the publication, and spacing. Font sizes and styles can make material difficult or easy. Larger fonts with very simple, manuscript-style letters are typically more accessible than tighter Roman-style fonts. Layout includes the coordination of print, graphics, and negative space (on the page). Simpler texts have straightforward designs at the book and page levels. At the book level, a simpler text may have a title page with body pages. At the page level, there is a balance between print and pictures and a highly consistent layout from page to page. Complex texts may include sidebars, different types of graphics, and less consistent layouts. A final formatting feature is spacing. Print-dense, tight spacing increases the difficulty of a material. Books with words that are spaced generously are easier.

Considering the many reader and text factors involved, text–reader matching is no simple task. In fact, the work of making a match does not conclude once a text has been selected. The arrow in Figure 1.1 represents the interaction between text and reader that occurs after text selection. Even though we can make informed matches, "the true test of readability ultimately resides within the interaction between reader and text" (Schirmer & Lockman, 2001, p. 39). This interaction will cause unexpected results, and we must carefully observe as children read and teach them to develop the same awareness.

My observations of Davis, a beginning reader, illustrate the unexpected results that can occur during text–reader matches. I have worked closely with Davis, and I have developed substantive knowledge about

his literacy knowledge. Nonetheless, one day I chose a book that did not work for him. As I listened to Davis read, it became clear that the book was all wrong. I began tallying the words that he was missing. Proportionally, he needed help with about 20% of the words, meaning that he was reading the book with only 80% accuracy. When the reading was finished, I felt a lot like he did; deflated. I pointed out that he had worked really hard and that the book was a little tricky, and I put the book away. Later I flipped back through it. The book did not work for Davis for some very specific reasons: It had a number of long words, several complex proper nouns, two unusual contractions, and a topic that was unfamiliar. In this case, I knew the reader and thought I knew the text, but the "chemistry" between the two just wasn't there. Close, reflective teaching is an essential element of text–reader matching; without it, high-quality matches will not take place.

Sometimes I have witnessed text–reader matches that provide little challenge to the reader and subsequently limit the reader's learning opportunities. The result is a plateau in performance and often a loss of interest. In the reading clinic, we worked with Jeremy, a fourth grader who was reportedly struggling and unmotivated. To avoid frustrating Jeremy, his tutor initially chose books about one-half grade below his reading level. Unfortunately, the tutor used books at this level for too long, and Jeremy began to act bored, roll his eyes, and exert very little effort. In addition, he paid little attention to the books that he was reading and sometimes failed to answer very simple questions about them. We realized that the texts were actually independent-level materials and that we were not making the best use of the instructional time that we had.

In matching readers with texts, we want to strive to build the reader's skill in handling increasingly difficult texts. To do so, we must gradually select books that progressively increase in difficulty. Then we must support readers in accessing those texts. Vygotsky (1978) called this process *scaffolding*, and it refers to teaching within a zone of proximal development. This is the learning space between that which a learner can do completely independently and that which she cannot do even with assistance. By teaching in this zone, teachers enable students to attain higher levels of functioning. One often-forgotten element of this theory, however, is that the entire purpose of teaching "in the zone" is to continue to challenge learners so that they gradually are able to perform tasks that were previously beyond their range. In other words, teaching slightly difficult material with support should shift a student's ability. The same principle holds true with books, as illustrated in Figure 1.2. When a teacher selects a book for instruction, it should provide optimal challenge. The solid arrows and the space between them mark

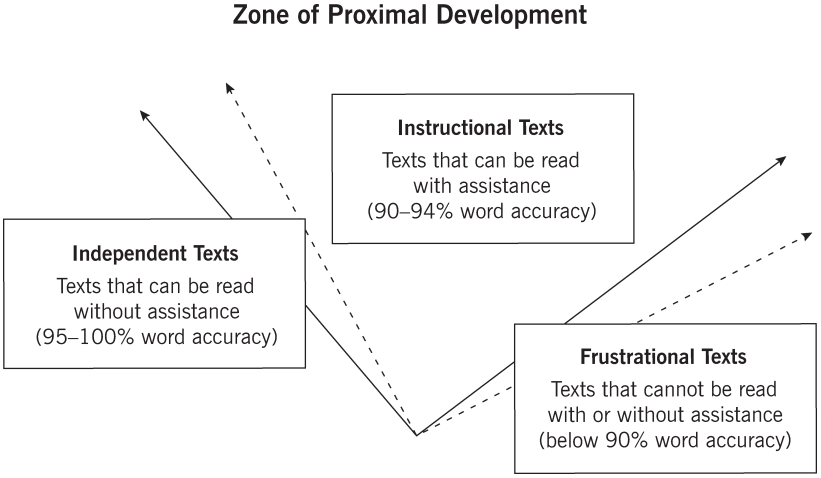

FIGURE 1.2. Text choices in the zone of proximal development.

the range of books that a child might be able to read initially with help. These are instructional-level materials. Materials in the area left of the arrow are independent materials that the reader can access with no help, and materials that fall in the zone to the right of the arrow are frustrational materials. The dashed arrows signify a shift in the zone of proximal development as a reader develops and is continually challenged. Gradually, books that were previously frustrational become accessible with assistance (instructional) and then accessible without assistance (independent). Books that are read without support during free reading or take-home reading should be in the independent range. Text analysis tools assist teachers in identifying texts that fall into the independent and instructional levels.

TEXT ANALYSIS TOOLS

Although each element of the text–reader match is important, this book focuses primarily on the measurement of *text factors* or *readability*. The term *text analysis tool* is used throughout this book to refer to the many mechanisms that estimate the difficulty of books. Text levels can be expressed using many different metrics. The most typical are grade levels expressed in grades and tenths (e.g., 2.3) or Guided Reading Levels expressed in letters (e.g., A, B, and C). Increasingly, I am also seeing schools use Lexiles expressed in Lexile units (e.g., 120L or 500L). All of

these tools help teachers begin the matching process, but they all have shortcomings. As a former third-grade teacher and current university faculty member, I have observed a love–hate relationship with text analysis tools. Although these tools are necessary and often helpful, they can be misinterpreted and misused. An experience that I had with an urban elementary school illustrates this point.

One summer I worked with teachers and a literacy coach to select reading materials. The funds for purchasing materials had to be spent quickly, so we sat down one afternoon with five catalogues in front of us and began what we thought would be a simple (and fun!) task. We wanted to select instructional materials that could supplement the basal reading series in grades K through 5. As we perused the catalogues, we became mired in numbers, letters, and other labels used to designate text difficulty.

One catalogue reported the difficulty of materials using standard grade levels. Books came in sets with a specific grade range (e.g., reading levels 1.0 to 1.5). Another company reported text difficulty using five different designations: (1) Reading Recovery numbers; (2) Guided Reading or Fountas–Pinnell letters; (3) Developmental Reading Assessment numbers; (4) color names used by the publisher (e.g., silver, gold, emerald); and (5) catalogue labels used by the publisher (e.g., "emergent," "early," "early fluent," and "fluent"). Still another company added to the mix their own leveling system using letters that did not correspond with the Guided Reading levels. As we talked to each other, we became confused by these many symbols. The simple and necessary task of determining text difficulty had been transformed into a veritable conundrum. By the end of the day, we were howling at the absurdities of all the different letters, numbers, and colors. Beneath our good humor, however, was a layer of genuine concern. Although we were able to piece together bits of information about these labels based on our collective knowledge, individually our grasp of each of these systems was tentative at best.

The experience left me with two thoughts. First, the diversity of labels amazed me. Clearly, some of the labels were idiosyncrasies of particular publishing houses, but still a range of legitimate and widely used systems existed. My second insight was that it could be easy to misinterpret the various difficulty labels, and the result could be expensive. The experience impressed upon me the importance of having a basic understanding of these labels. All text analysis tools exist for the purpose of estimating text difficulty. However, not all tools consistently address the same text elements. Some focus a bit more on content, whereas others focus on word difficulty. Different tools can coordinate with different purposes. Some systems make very fine distinctions between texts, dis-

tinctions more appropriate at the very beginning stages of reading. Other tools are more applicable to ranges above the first grade. The key to using these tools is unlocking how each appraises text difficulty and then matching the tool, and resulting text difficulty label, with the readers' needs.

After my experiences with these teachers, I discovered many other text analysis tools. Figure 1.3 highlights some of the major text analysis tools developed since the 1930s. The timeline shows tools in the three categories described in this book: traditional readability formulas, second-generation readability formulas, and the beginning reading scaffolds of vocabulary control, decodability, and qualitative leveling systems. The timeline reveals that text analysis tools have had a long history and continue to develop today.

In summary, putting the right books in the hands of children can make or break their literacy development. Despite this imperative, little attention has been given to matching readers with texts or understanding available tools. There are a number of text analysis tools and, unfortunately, a great deal of misunderstanding about what various labels mean. In addition, some states mandate exactly how text difficulty must be established, compromising professional autonomy. The purposes of this book are to inform the profession about the workings of the most popular text analysis tools and to show school personnel how to use these tools. Educators who are informed can make choices and select tools that best meet the needs of their students.

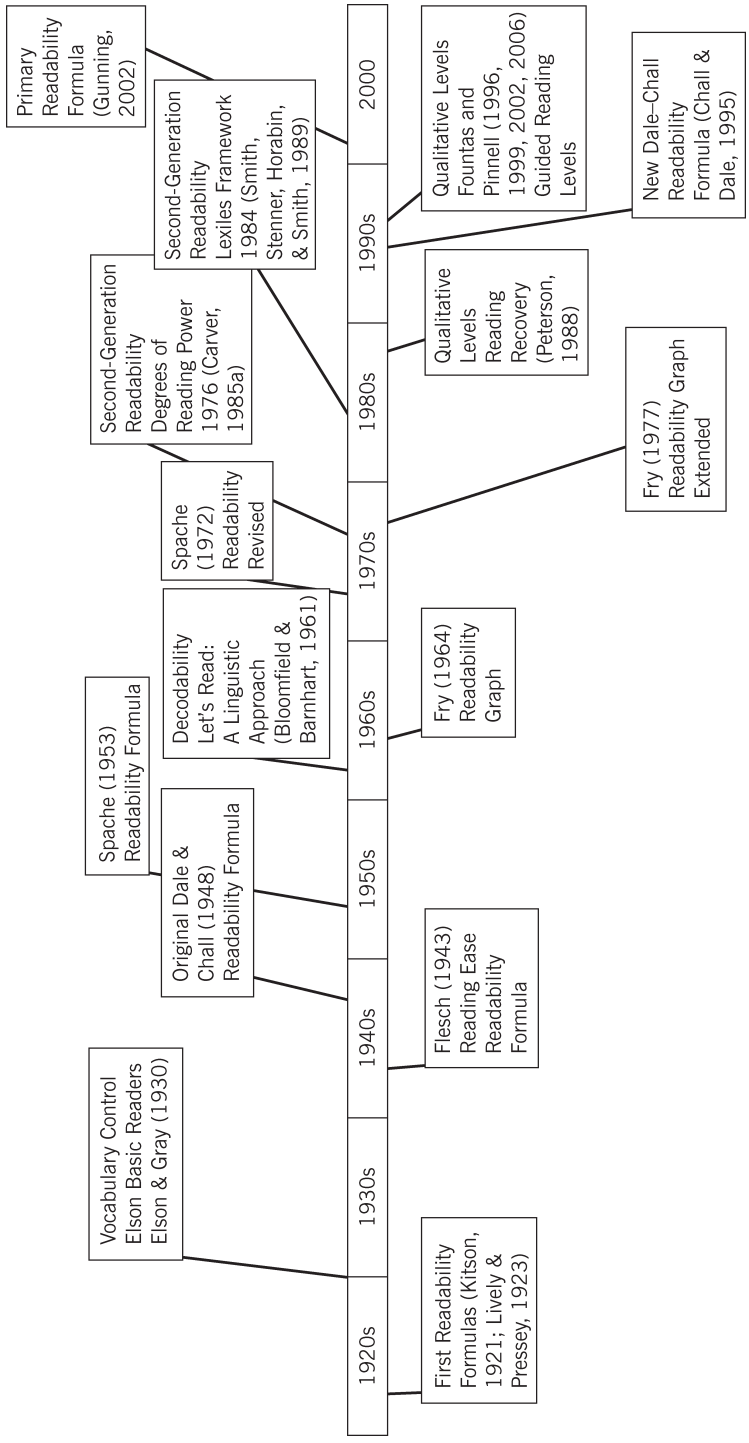

FIGURE 1.3. Highlights in the development of text analysis tools.