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**EXPLORING THE GROWTH OF TEXT-READING FLUENCY IN  
UPPER-ELEMENTARY ENGLISH LANGUAGE LEARNERS  
DURING INSTRUCTION BASED ON REPEATED READING**

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by

Katharine Staub Harrison

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A dissertation submitted to the faculty of  
San Diego State University and the University of San Diego  
in Partial Fulfillment  
of the Requirement for the Degree  
Doctor of Education

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Dissertation Committee

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Maria Luiza Dantas, Ph.D., University of San Diego

---

May 2011

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by

Katharine Staub Harrison

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## **DEDICATION**

This study is dedicated to all the courageous students who negotiate diverse linguistic and cultural worlds at school. I hope that I have helped a few of them on their way. May my teaching continue to improve so I may serve them better. May we all get better, so they receive the rich education they deserve.



## **ABSTRACT OF THE DISSERTATION**

Exploring the Growth of Text-Reading Fluency in Upper-Elementary  
English Language Learners During Instruction Based on Repeated Reading

by

Katharine Staub Harrison

Ed.D. Candidate in Literacy Education

San Diego State University and University of San Diego, 2011

For the large population of school-age English language learners in California and the United States, the challenge of learning a second language while learning academic content is formidable. Learning to read English skillfully is key to their success. Reading instruction focused on development of oral text-reading fluency has shown strong potential for accelerating the general reading achievement of native-English-speaking children, but there is a lack of concomitant research on English language learners. This dissertation describes a formative experiment with the goal to improve, in 9 weeks, the general reading achievement of 17 English language learners in Grades 3, 4, 5, and 6. These students were at the Intermediate level of English development and lagged behind their native-English-speaking peers in reading. A formative experiment is basically descriptive in nature and utilizes both quantitative and qualitative study methods. The instructional intervention for this study was based on theories of language acquisition, reading development, and automatic processes of reading that underlie fluent reading. The intervention combined two types of repeated reading instruction: (a) silent repeated reading of controlled-vocabulary texts, with comprehension checks, and (b) repeated oral reading for performance, with explicit instruction about oral text-reading fluency. Instruction was altered as necessary, based on formative data, to meet the pedagogical goal. The students' pre- and postintervention performances on reading-fluency indicators, including standardized measures, are compared and a detailed narrative of the experiment reported. The pedagogical goal, improved reading fluency with comprehension, was realized for most of the students on at least one instrument. On the standardized reading-fluency measures, increases in reading accuracy offset decreases in reading rate for many students, an unexpected finding, while comprehension of unfamiliar passages improved. Most students improved on at least two of four measures of prosodic reading, with the exception of third graders.

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## **CHAPTER 1**

### **INTRODUCTION**

#### **BACKGROUND**

Despite increased production and consumption of image-based digital technologies, skilled reading continues to be a pillar for success in school and beyond. The last two large-scale assessments of our nation's fourth graders (Daane, Campbell, Grigg, Goodman, & Oranje, 2005; Pinnell et al., 1995) indicated that one-third to one-half did not read fluently enough to comprehend well what they read, at a vulnerable time in their formal learning trajectory when academic reading demands increase sharply. This challenge is exacerbated for English language learners (ELLs; Cummins, 2003), who are now a sizeable portion of the U.S. school-age population, and for poor children (Chall, Jacobs, & Baldwin, 1990), including many non-English-speaking immigrants. In 2007-2008, 10.7% of U.S. public school students were ELLs (National Clearinghouse for Educational Language Acquisition [NCELA], 2010), and 25% of California's total K-12 enrollment during 2007-2008 were classified as ELLs (California Department of Education [CDE], 2008a, 2008f). The challenge of learning a second language while learning academic content is formidable. As a group, immigrant children learning English as a second language lag behind their native English-speaking peers in academic achievement until they reach the third generation (August, 2008; Thernstrom & Thernstrom, 2003).

## STATEMENT OF THE PROBLEM

In the U.S. school system, normally developing readers are expected to consolidate reading fluency around the end of second grade and no later than third grade (Chall, 1996; Ehri, 1991). Oral reading opportunities typically decline during third grade in favor of silent reading. During this time, primary demands shift from “learning to read” to “reading to learn” (Chall, 1996). From third grade on, students’ silent reading fluency is expected to keep pace with increasingly complex texts. Despite this expectation, two national studies of the reading of our nation’s fourth graders (Daane et al., 2005; Pinnell et al., 1995) concluded that fully 45% and 39%, respectively, did not demonstrate adequate oral reading fluency with grade-level texts and would benefit from continuing opportunities to read orally. Moreover, only 13% and 10%, respectively, read at the highest prosodic, or meaningfully expressive, level. The National Reading Panel (National Institute of Child Health and Human Development [NICHD], 2000) also recommended oral reading practice at both primary and intermediate grades, but fluency-targeted instruction has largely been neglected in U.S. classrooms (Allington, 1983, 2006; Rasinski & Zutell, 1996).

Reading fluency is the gateway to “reading to learn” (Chall, 1996; Ehri, 1991). A strong case has been made by Stanovich (1986/2004), Pikulski and Chard (2005), Cummins (2003) and others that fluent reading itself provides the incidental learning of vocabulary, syntax, and background knowledge that allows a reader to mature into increasingly difficult texts. Stanovich (1986/2004) established a robust empirical relationship between the amount of independent reading sixth graders did in 1 year and their performance on standardized tests, which he characterized as a “Matthew effect” for reading: Students who do not develop into fluent, independent readers read less, learn less, and are



increasingly left behind their fluent counterparts. Jay Samuels (personal communication, February 21, 2011; Samuels & Wu, 2003) provided experimental evidence for Matthews effects in reading, for third and fifth graders (Samuels, 2006). Stanovich's (1986/2002) finding was mirrored by data on the independent reading reported by fourth graders in the 1992 and 2002 National Assessments of Reading Progress (NAEP; Daane et al., 2005; Pinnell et al., 1995). Moreover, basic reading fluency, demonstrated on simpler texts containing familiar, everyday vocabulary, may not ensure later fluency in complex texts, when syntactic and vocabulary demands multiply (Pikulski & Chard, 2005); this divide may put ELLs at disproportionate risk for academic failure (Cummins, 2003). Krashen (2001), whose earlier hypotheses of second language acquisition (Krashen, 1982a) are widely acknowledged by educators, advocates self-selected, independent reading in school as a primary way to promote positive academic learning outcomes for language-minority students.

Two decades of experimental and quasi-experimental studies show that repeated-reading instruction can accelerate both the oral text-reading fluency and the general reading achievement of at-risk students who speak English as their native language (Kuhn & Stahl, 2004). With the exception of three doctoral dissertations (Boisvert, 2006; Denton, 2000; Kemp, 2006), there does not appear to be any peer-reviewed research, experimental or otherwise, on the use of repeated reading with ELLs (M. Kuhn, personal communication, March 20, 2008; Lesaux & Geva, 2008; T. Rasinski, personal communication, January 11, 2008; P. Schwanenflugel, personal communication, March 28, 2008). Only one of these dissertations (Denton, 2000) has reported outcomes of repeated reading for ELLs in upper elementary grades. This is important because academic reading expectations for upper-elementary students are considerably different from those of primary grade students (Chall,

1996; Chall et al., 1990; Cummins, 2003; Pikulski & Chard, 2005; Stanovich, 1986/2004). For the ELL, everyday oral English (Basic Interpersonal Communication Skills, or BICS) does not contain a sufficient representation of syntactical forms and vocabulary for academic language development, and reading is a significant input for academic English language development (Cummins, 1979). Even ELLs who are successful with English literacy in primary grades may find themselves at risk when they reach upper grades (Cummins, 2003).

The research base on the reading development of English as a second language is more limited when compared to the research base for native English-speaking students, but suggests that ELLs follow a similar trajectory for learning to read in English as their native-speaking peers (Farnia, 2006; Lesaux & Geva, 2008; Lesaux & Siegel, 2003); this trajectory changes dramatically in the upper elementary grades (Chall, 1996; Farnia, 2006). While ELLs are heterogeneous and require adjustments to their instruction, relative to native English speakers (Goldenberg, 2008), there is sufficient reason to expect that ELLs will likewise benefit from fluency-targeted reading instruction that can be implemented readily inside classrooms. While comprehensive school-wide or district-wide approaches to reading instruction (e.g., Slavin & Cheung, 2003) have shown positive results with ELLs, effective fluency-targeted reading instruction could readily be used by a single teacher within a single classroom, without extensive training or support.

The heterogeneity of ELLs, their need for adjustments to instruction, and the lack of research on repeated reading instruction for ELLs in upper elementary grades suggested the use of a formative experiment (Reinking & Bradley, 2008) to explore the pedagogical and environmental factors that contribute to their growth in English reading fluency during instruction based on repeated reading.

## PURPOSE OF THE STUDY

The study addressed the following research question: *What pedagogical and environmental factors contribute to the acceleration of oral text-reading fluency with reading comprehension in upper-elementary English language learners during instruction based on repeated reading?* A formative experiment defines a pedagogical goal based on theory and determines an instructional intervention with a high probability of meeting that goal (Reinking & Bradley, 2008). This study had the pedagogical goal of accelerating prosodic oral text-reading fluency with accompanying reading comprehension, for ELLs in Grades 3 through 6 who had reached intermediate levels of oral English competency but lagged behind in English reading achievement. As the intervention proceeded, student progress was formatively assessed and the instruction varied accordingly, until the outcome was reached. Through the use of qualitative methods, the researcher recorded and later reported, in fine detail, with quantitative support, how the outcome was reached, including the instructional environment and how it may have changed. Rich description explored pedagogical and environmental factors that could be used to suggest traditional experiments that make positive outcomes generalize-able.

Four theoretical frameworks, outlined in the next section and detailed in Chapter 2, were used to develop the pedagogical goal and initial instructional choices used in this formative experiment. In addition to theoretical foundations for learning to read in English as a first and as a second language, and for use of repeated reading to develop reading fluency, an understanding of the types of text that may be used for repeated reading was critical. Repeated reading of “scaffolded” content texts has shown great promise for accelerating the text-reading fluency and comprehension of beginning and struggling readers (Hiebert, 2005a;

Hiebert, Brown, Taitague, Fisher, & Adler, 2004; Huxley, 2006) and is advocated for ELLs (Hiebert et al., 2004). These texts contain a high percentage of words in the highest word-frequency bands of English (Zeno, Ivens, Millard, & Duvvuri, 1995), along with frequent repetitions of key-concept terms that are rare and multi-syllabic. In addition, forms of reading instruction targeted at improving prosodic, or expressive, oral text-reading fluency, such as Readers Theater, build explicit connections between oral and written language, particularly for syntax, and may be specifically helpful for ELLs. Older children need authentic reasons to engage in repeated reading (Rasinski, 2008). Charting their own reading fluency indicators and reading for performance have both been shown to motivate English-only students to read repeatedly for reading development and were expected to be encouraging for upper-grade ELLs as well. This assertion is based on descriptive studies of oral reading for performance summarized in Chapter 2.

## **THEORETICAL FRAMEWORKS**

Four theoretical frameworks were used to develop the pedagogical goal and initial instructional choices for the formative experiment: (a) stage theories of reading development (Chall, 1996; Ehri, 1991; Samuels, 2002) including what is known about development of reading in a second language (Lesaux & Geva, 2008); (b) cognitive theories that explain automatic processes of reading (LaBerge & Samuels, 1974; Logan, 1997; Perfetti, 1985; Stanovich, 1980); (c) theories of first language acquisition (Pearson & Stephens (1994), and second language acquisition (Cummins, 1979; Krashen, 1982b, 2003a); and (d) a model of the measurable demands of texts and their influence on reading fluency (Hiebert et al., 2004; Hiebert & Fisher, 2005). These frameworks are explored in detail in Chapter 2.

The overall theoretical perspective bridges two historically contrasting views of reading instruction, within a constructivist paradigm: the “simple” or “word recognition view” and a “socio-psycholinguistic view,” which combines elements of sociolinguistic theory with psycholinguistic theory. Dating back to John Dewey in 1916, *constructivist theory* asserts that an individual learner naturally, actively, and continuously constructs new knowledge from elements in the environment, integrating it with previously learned information (Tracey & Morrow, 2006). A word-recognition view of reading instruction treats reading primarily as a restricted cognitive event, the linear recognition of words and their associated meanings, which can be directly taught and learned, alongside or outside the immediate context of a text (Gough, 1981, 1984; Gough, Alford, & Holley-Wilcox, 1981). Historically, it has been associated with a behaviorist paradigm, generally considered at odds with constructivism. Dating back to John Watson in 1913, and dominating education for the first half of the twentieth century, *behavioral theory* asserts that we cannot make inferences about what’s happening inside a subject’s (reader’s) mind; we can only observe the subject’s outward behavior and conform instruction to modify it (Tracey & Morrow, 2006). Socio-psycholinguistic theory, in contrast, views reading as a language event drawing on many facets of context for meaning, both the immediate context of the text itself and social contexts surrounding it; over the course of many such events, reading is *acquired*, or constructed, in much the same way oral language is acquired (Baratz & Shuy, 1969; Bloome & Green, 1984; Goodman, 1967; Labov, 1972; Smith, 1971).

Each perspective has different instructional decisions associated with it. Many second-language educators (e.g., Freeman & Freeman, 2003) argue that ELLs are better served by a socio-psycholinguistic approach to reading, as a word-recognition approach

stimulates “word calling” without comprehension or development of critical background information and critical thinking. Others (e.g., Gersten et al., 2007; Treadway, 1997) argue for a combination approach. Stanovich (2000) stated that the value of psycholinguistic theory (Goodman, 1967; Smith, 1971) to explain reading has been devalued, because a major hypothesis of psycholinguistic theory, that poor readers are focused more on words and skilled readers more on context, has been debunked; skilled readers do, in fact, pay close attention to individual words as well as context.

Therefore, this study takes a “bridging” view between these two approaches. Repeated reading, as an instructional practice, has roots in Mental Discipline Theory, or the strengthening of skills through practice, which dates back to Aristotle and Plato (Tracey & Morrow, 2006), and appears to align with a word-recognition view of reading. However, slow reading is associated with lower reading comprehension (Daane et al., 2005; Fuchs, Fuchs, & Hosp, 2001) and less reading is associated with reduced access to academic learning for ELLs (Cummins, 2003) and native English speakers (Stanovich, 1986/2004). Therefore, reading-fluency instruction is seen as a potentially powerful link or bridge between the necessity for efficient word recognition and access to a rich reading context, particularly for older readers who have lagged behind their peers and do not choose to read independently. In this sense, it may be viewed as providing *opportunity to read* (Guthrie, Schafer, & Huang, 2001), the common variable in all the major forms of reading-fluency instruction summarized below. Certainly, repeated reading can be combined with elements of instruction aligned with a socio-psycholinguistic view. Classroom enactments of two types of repeated reading in the study intervention drew tangentially on theories of meta-cognition and engagement, which fall under a constructivist paradigm (Tracey & Morrow,

2006), as does a socio-psycholinguistic view of reading. Contrasts between word-recognition and socio-psycholinguistic views of reading are elaborated in Chapter 2.

## **DEFINITION OF TERMS**

This section defines key terms necessary to a general understanding of the study:

*English language learner*, *reading fluency*, *fluency-targeted* or *fluency-based instruction*, and *text difficulty*. Additional terms helpful to an understanding of these four broader terms are introduced.

### **English Language Learner**

*English language learner* is a label that describes a variety of realities and educational needs. For purposes of this study, an *English language learner* (ELL) is defined as a public school student (a) whose native language is other than English, as indicated by his or her parent on the California Department of Education's Home Language Survey, and (b) who has not yet demonstrated speaking, listening, reading, and writing skills in English that approximate those of same-age native English speakers, as measured on the annual California English Language Development Test (CELDT). The broader, more general description, *language minority* (LM) student, is used when this status cannot or could not be reasonably confirmed, and may include students who read English proficiently and are no longer classified as ELLs. This study acknowledges that ELLs in the general population are heterogeneous in their language and cultural backgrounds, degree of English language development, and the types of school English programs they are engaged in; background details about the ELLs who participated in this study are given in Chapter 3. "Intermediate" (capitalized) is used throughout to make specific reference to ELLs who have scored in this

band on the CELDT; when the CELDT determiner does not apply, “intermediate” (not capitalized) is used as a general descriptor for ELLs who are not beginners but not yet proficient at English.

## **Reading Fluency**

This skill is usually understood as the audible manifestation of reading characterized by smooth, rapid, seemingly effortless rendering of words, with phrasing and expression that indicate understanding. Many variations on the meaning of reading fluency abound in research and practice literature. Kame’enui and Simmons (2001) characterized it as *eidomine*, a term so vague as to be of almost no use at all. They state that, “Reading fluency, as a construct, does not enjoy definitional, theoretical, empirical, or instructional consensus in the research literature” (p. 204). Yet, they maintained, the idea of something so intrinsically elegant as reading fluency, that we recognize readily, means it has to be real; therefore, it is our challenge to continue to define it operationally, conceptually, and theoretically. For purposes of this study, reading fluency follows a comprehensive working definition modified by Pikulski (2006):

Reading fluency is a developmental process that refers to efficient, effective decoding skills that permit a reader to comprehend text. There is a reciprocal relationship between decoding and comprehension. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent-reading comprehension. (p. 73)

Chapter 2 reviews other definitions of reading fluency, including a complex definition by Wolf and Katzir-Cohen (2001) that specifies theoretically determined subskills of fluent reading, which may be specifically useful for instructing reading-disabled students. It also defines and elaborates on the associated terms *decoding*, *rate*, *accuracy*, *automaticity*,



*developmental process, prosody, and reading comprehension*, and reviews key theoretical and empirical relationships. For instance, reading comprehension has both empirical and theoretical relationships with reading rate and accuracy as well as with prosodic reading.

While the 2002 NAEP Special Study of Oral Reading (Daane et al., 2005) separated *rate* and *accuracy* entirely from reading *fluency*, which they used to mean expressive reading, the term *reading fluency* is most often characterized in terms of the speed and accuracy of words read, its manifestation in oral speech. Hasbrouck and Tindal (1992, 2006) have normed oral reading rates for native English speakers by grade level. In this study, the dimensions of speed, accuracy, reading development, comprehension, and expressive reading, or prosody, are integral. This study favors the term *oral text-reading fluency* to distinguish the manifestation of reading fluency from the comprehensive underlying concept of the Pikulski definition.

### **Fluency-Targeted or Fluency-Based Instruction**

This term refers to instruction that has the expressed goal to increase text-reading fluency, usually oral and measured as Words Correct Per Minute (WCPM), with or without demonstrated expression (prosodic reading) or comprehension. The main approaches have been repeated reading, assisted reading, wide reading, and reading-fluency lessons integrated with basal reading instruction (Kuhn & Stahl, 2004).

*Repeated reading* refers to the process of re-reading a text a specified number of times or to a criterion rate. It was studied first by Samuels (1979/1997), and a substantial body of research supports its use with native English-speaking children (Kuhn & Stahl, 2004).

*Assisted reading* means that a skilled reader offers voice support at a target rate as the student reads along and joins in, usually aloud. Assisted reading was first described by Carol Chomsky (1976) and has accumulated a body of research in support of its use with native-English speakers (Kuhn & Stahl, 2004).

*Wide reading* refers to scaffolded practice reading of different instructional-level texts, rather than repeated reading of one text, and has enjoyed recent experimental support (Kuhn et al., 2006; O'Connor, White, & Swanson, 2007). *Scaffolding* refers to temporary supports provided by a teacher that allow a student to read texts above his independent level; these supports are gradually released until the student reads independently at the target level (Pearson & Gallagher, 1983). Within each of these broad types of fluency-targeted instruction, finer distinctions can and have been made (Rasinski, 2003).

*Wide reading* has also been used to refer to extensive independent reading by students, rather than a type of intervention that specifically targets oral text-reading fluency; it, too, has been positively correlated with reading performance (Pinnell et al., 1995; Postlethwaite & Ross; 1992; Stanovich, 1986).

*Opportunity to read* refers to the amount of connected-text reading in a fluency-based approach (Guthrie et al., 2001) and is a consistent feature of both extensive wide reading and oral text-reading fluency interventions, for all age groups and skill levels.

*Repeated practice of sub-skills*: In addition to the reading of connected texts, a fifth type of fluency-targeted instruction stresses repeated practice with a comprehensive set of fine-grained subskills of reading, such as the reading of lists that contain within-word phonics patterns; these subskills assist smooth text-level reading at earlier stages of reading development (Wolf & Katzir-Cohen, 2001).

Finally, there are combination approaches, including those that involve students in meta-cognition of their own reading fluency (Reutzel, 2005). With all approaches, the level of teacher scaffolding (modeling, guidance, and release to independence) may vary, affecting outcomes. Features of texts that are used for fluency-targeted instruction are an important variable in the success of repeated-reading and assisted-reading approaches (Hiebert & Fisher, 2005); carefully chosen texts act as a scaffold for reading instruction. In this study, fluency-targeted instruction focused on scaffolded repeated reading with strong consideration of word-level text features. It made use of students' meta-cognition of their own reading fluency and included comprehension and prosodic reading as requirements for fluent reading.

### **Text Difficulty**

Ascertaining the difficulty of instructional texts is critical for the success of reading instruction (Hiebert & Fisher, 2005). Three labels that relate the difficulty of a text with the level of support required by a particular student to read and understand it were initially identified by Betts (1946) and are widely used in teaching literature and in this study: *Independent*, *instructional*, and *frustration(al)* reading levels. An independent-level text is one where no support is required; the student can read and understand the text easily, and an occasional word challenge can be readily solved from context or makes no significant impact on understanding. A child reading with 98 to 100% word accuracy and 95% comprehension is typically considered to be at his independent level. An instructional-level text is one that is unlikely to be understood well without support. It contains a few word and text-level challenges, such that learning will readily occur from the reading provided there is some sort of interaction or support from a teacher or capable other(s). A child reading with 95-98%

word accuracy and 75%-95% comprehension is typically considered to be at her instructional reading level. Frustration-level text contains too many challenges for the student to make meaning or learn from the text and is generally thought to characterize texts where more than 1 in 10 words are unfamiliar (Betts, 1946; Rasinski, 1999). Five current and historical methods for determining objective levels of text difficulty, against which an individual's reading level may be compared, were reviewed by Hiebert (2002b). In this study of the text difficulty of standards-based texts and assessments for Grade 3, she was able to reliably relate only three of these methods to purported grade levels of texts: older readability formulas, Lexiles (a recent manifestation of readability formulas), and Critical Word Factor (CWF), a task analysis feature.

This study makes use of *Critical Word Factor*, the number of words in a text that will be difficult when measured against a graded curriculum. Hiebert (2002b) concluded that the CWFs of graded basal readers published since 1989 were too high to support instructional-level reading for many students. The words in the texts used in the silent repeated-reading portion of this study are measured against a graded "fluency curriculum" designed by Hiebert (2008b). This curriculum is based on word frequency zones (Hiebert, 2005b) for the 5,000 most frequently occurring words in English textbooks from Kindergarten through college (Zeno et al., 1995; see Appendix A).

### **SIGNIFICANCE OF THE STUDY**

English language learners in the upper elementary years are more likely to be at risk for academic failure than their native English-speaking peers (CDE, 2008c, 2008e). English reading is the foundation of academic achievement in the United States and repeated-reading

instruction may accelerate the English-reading achievement of ELLs as it has for English speakers. The experiences of ELLs should be of interest to a broad spectrum of elementary-school educators and researchers. The primary limitation of the study is the lack of ability to generalize results beyond the study group. However, rich description of the process used to achieve the pedagogical goal suggested traditional experiments that could be undertaken to generalize the contribution of repeated-reading instruction to the reading achievement of upper-elementary ELLs.

## **CHAPTER 2**

### **REVIEW OF THE LITERATURE**

The review begins with a presentation of demographic information that underscores the critical importance of addressing the needs of English language learners (ELLs). Second, it looks at literature about first- and second-language acquisition and instructional practices related to them. Literature about reading acquisition in general, and for second language learners in particular, follows. The focus is then narrowed to theory and empirical research about reading fluency. Studies of reading fluency instruction and the role of texts in this instruction are presented last.

### **BACKGROUND ON ENGLISH LANGUAGE LEARNERS**

The proportion of language-minority children and youth in the United States dramatically increased between 1979 and 1999, from 6 million to 14 million (National Center for Education Statistics [NCES], 2004). Freeman and Freeman (2003) claimed that between 1990 and 2000, there was a 105% rise in students K-12 identified as limited English proficient (LEP), but only a 24% rise in K-12 students overall. The National Clearinghouse for English Language Acquisition (NCELA, 2010) reports that 10.65% of U.S. public school students in 2007-2008 were ELLs, an increase of 53.25% from 1997-1998, compared to an increase of 8.75% for total pre-K-12 enrollment over the same period. More than 460 languages were reported in a nationwide survey in 2000-2001, with Spanish reported as the home language for 72% of LEP students (Kindler, 2002). The Migration Policy Institute

(MPI, 2010), reported “over 150” home languages reported for ELLs for 2008-2009 with an overwhelming majority (77.2%) speaking Spanish. The California Department of Education (CDE, 2008b) reported 56 home languages other than English for 2007-2008, with Spanish (82%) the most commonly reported.

One-third of the 5- to 24-year-old language minority children and youth surveyed in 1999 reported they had difficulty speaking English (NCES, 2004). Native-born children, and children with native-born parents, were much more likely to speak English well than foreign-born children and children with foreign-born parents. The more recently a child had come to the United States, the more likely he or she was to report difficulty speaking English. Although the prevalence of limited English proficiency declines across three generations to the point where it largely disappears (Census 2000 Supplementary Survey, as cited in Thernstrom & Thernstrom, 2003), immigration continues to supply a significant number of ELLs to U.S. schools, and California schools in particular. Although growth in ELL populations is now shifting to Mid-western and Southeastern states, the highest ratios of ELLs to non-ELLs (>10%) are found in the Western and Southwestern states and Alaska (NCELA, 2010).

During 2000-2001, California enrolled 1,511,646 students, the largest number of ELLs in U.S. public schools (Kindler, 2002). The number reported by the state of California for 2007-2008 was similar, 1,553,091, or 25% of total K-12 enrollment (CDE, 2008a, 2008f). Statistics reported for 1999-2000 in the six major immigration states, including California, revealed a striking pattern of segregation. More than 60% of ELLs were in schools where more than 30% of their schoolmates were also ELLs, yet only 13% of students in these six states were ELLs (NCES, 2002). National statistics also reflect a significant increase since

1993 in ELLs receiving all-English instruction (Zehler, Fleishman, Hopstock, Stephenson, & Sapru, 2003). After Californians passed Proposition 227 in 1998, large numbers of bilingual programs were replaced with Structured English Immersion (SEI) programs. As a result, nonbilingual teachers were seriously under-prepared for the sudden influx of ELLs into their classrooms (Gandara, Maxwell-Jolly, & Driscoll, 2005). During 2007-2008, California enrolled 755,966 ELLs. Only 5% received bilingual instruction, 21% were in English and core-content instruction with primary language support, while 55% received English and core-content instruction in English only (CDE, 2008a). Another 19% received other forms of English language development (ELD) support or none at all.

Nationally, ELLs fail to meet state standards in tests of English Language Arts at much higher rates than their native English-speaking schoolmates (U.S. Department of Education, 2002). During 2007-2008, 73% of fourth-grade ELLs performed below Proficient on the English Language Arts portion of the California Standards Test (CST) compared to 45% of students overall (CDE, 2008c, 2008e). This cannot be attributed to socioeconomic status, as the percentages for nonproficiency among ELLs are considerably higher than for economically disadvantaged children at large (CDE, 2008d). At 10th grade, for the same school year, the proportion of ELLs in California who scored below Proficient on the ELA portion of the CST was a staggering 95%, compared with 59% of total students (CDE, 2008c, 2008e). Moreover, 69% of ELLs scored in the lowest two performance bands, compared with 31% of students overall.

Finally, language minority students are more likely to drop out of secondary school than students who speak English at home, and dropouts are more likely to earn less when they are employed (NCES, 2003, 2004). A fundamental shift in the American economy since



1980 has led to a dramatic increase in the number of jobs requiring at least some college for qualification (Carnevale & Desrochers, 2003). As a result, ELLs remain at a disadvantage in the U.S. job market.

There can be no doubt, when these statistics and trends are taken together, that the large population of school-age ELLs in California and the United States are more at risk for academic failure, with severe socioeconomic consequences, than their native-English-speaking peers. Current and recent immigrants cannot afford to wait three generations to “catch up” with native-born, English-speaking citizens.

### **THEORIES OF FIRST LANGUAGE ACQUISITION**

Pearson and Stephens (1994) describe a profound paradigm shift in the understanding of oral and written language acquisition that began in the 1960s, replacing a behaviorist “word recognition” view of reading (Gough, 1981, 1984; Gough et al., 1981) with a constructivist “socio-psycholinguistic” view of reading (Bloome & Green, 1984; Goodman, 1967; Smith, 1971).

During the first half of the twentieth century, knowledge of language comprehension and development took a *behaviorist perspective*, from the field of psychology. *Behaviorism* was concerned with the surface-level outcomes of mental processes, indexed by overt, observable behaviors; it left speculation about the inner workings of the mind to philosophers. Behaviorism was initiated by John Watson in 1913 (Thomas, 1996) and dominated by the conditioning and connectionist theories of Pavlov, Skinner, and Thorndike (Tracey & Morrow, 2006). Language comprehension was thought to be primarily the mental operation of stringing together the meanings of adjacent words. Similarly, behaviorists

explained the reading process as the linear, visual perception of words and their associated meanings. Educators, led by Skinner, translated the precepts of behaviorism into the teaching of discrete skills, organized into complex skills by “chaining” (Thomas, 1996).

During the latter half of the twentieth century, the two new perspectives of *psycholinguistics* and *cognitive psychology* undermined behaviorism (Pearson & Stephens, 1994). Noam Chomsky (1957, 1965) led the revolution in linguistics with a *nativist* theory of language acquisition. He claimed that language is native to humans: we come to the world “wired” to acquire the language of the community into which we are born. He based this on the observation that language is incredibly complex yet is acquired easily and naturally by children living in an environment in which they are simply exposed to the language of their community, prior to any formal schooling. People in the field of education, led by Ken Goodman (1965, 1967) and Frank Smith (1971), wondered whether behaviorist views of reading would hold up when similar perspectives were applied to the comprehension and acquisition of written language.

During the 1960s, two lines of research emerged into the new field of psycholinguistics. One group tested the implications of the new linguistic theories for language comprehension, the other for language acquisition (Pearson & Stephens, 1994). The language acquisition group, led by Roger Brown (1970), established that language learning was a rule-governed process. Children do not imitate written language but, as members of a language community, participate in oral language and invent, or construct, rules for themselves about how their language works. Children are active learners who infer rules and test them out. Their “mistakes” can be used to understand these invented rule

systems. Children become proficient users of oral language in a relatively short period of time, long before Kindergarten, and do so without direct instruction.

Reading educators, led by Goodman and Smith, began to wonder what the teaching of reading and writing would look like if they assumed that children learn to read and write in much the same way they learn to talk, as members of a community in which reading and writing are socially valued activities (Pearson & Stephens, 1994). Goodman (1965, 1967) characterized reading “mistakes” as “miscues” that reveal how readers are trying to make sense of text, through the use of syntactic cues, semantic cues, and graphophonic cues. Word order, the basis used by behaviorists to “explain” reading, provides syntactic cues. Smith (1971) argued that reading is not something one is taught, but rather something one learns to do, with no special prerequisites, as a consequence of belonging to a literate society. He argued that one learns to read from reading, therefore the function of teachers is to help children read, rather than to teach reading directly. According to his view, skilled readers make use of their prior knowledge of three sources for cueing, and attend minimally to visual information, a process often described as “top down”—from context to word. Reading is a matter of making informed predictions and is a constructive process, whereby readers make sense of what is encountered based on what is already known. The psycholinguistic perspective encouraged educators to value student literacy experiences that focused on making meaning, to value texts with natural language patterns, and to view children’s reading errors, or “miscues,” as a generative rather than a negative phenomenon (Pearson & Stephens, 1994).

A parallel emerging field, sociolinguistics, suggested that educators rethink their views about language and behavior (Pearson & Stephens, 1994). Children’s dialects came to

be seen as linguistic differences rather than linguistic deficits (Baratz & Shuy, 1969; Labov, 1972). “Context” in reading was increasingly understood to be more than the print that surrounded particular words on a page; it includes instructional, noninstructional, home and community contexts of literacy (Bloome & Green, 1984). In the sociolinguistic perspective, literacy events (reading and writing) always occur in a context that is shaped by the event at the same time as it shapes the event. Knowledge and language are constructed, social *processes* within a complex world of social, political, and cultural differences.

The historical trends described above suggest two general and contrasting theoretical frameworks for thinking about the acquisition and learning of English by children in school. The first, which Freeman and Freeman (2003) called a “word- recognition view,” is essentially a continuation of the behaviorist perspective, with an emphasis on direct teaching and learning of oral and printed word features and meanings, in a necessary sequence. It emphasizes “bottom up” approaches that de-emphasize the context of reading (Gough, 1981, 1984; Gough et al., 1981). The second framework, which Freeman and Freeman (2003) term a “socio-psycholinguistic view” of reading combines main concepts from sociolinguistics and psycholinguistics, emphasizing the ways in which students construct language through meaningful participation in a literate environment (Baratz & Shuy, 1969; Bloome & Green, 1984; Goodman, 1967; Labov, 1972; Smith, 1971). Acrimony that emerged among educational policymakers during the 1990s, as they uncompromisingly championed one or the other of these perspectives, has been termed “the reading wars” (Pearson, 2004). Many second-language scholars, including Krashen (2003a, 2003b) and Cummins (2003), continue to favor a socio-psycholinguistic view of English reading development for ELLs, while allowing that limited instruction in isolated word-level skills may be helpful for ELLs as they

are first learning to read, in either their first or second language. Other researchers such as Gersten et al. (2007) and Treadway (1997) advocate a combined approach.

## THEORIES OF SECOND LANGUAGE ACQUISITION

Acquisition of a second language outside of school, from the community that uses it, is often termed Second Language Acquisition, or SLA, and is differentiated from acquisition of the second language at school, or L2. Theories described in this section about the acquisition of a second language are tied to how instruction in the second language, L2, is presented at school. Historically, two major approaches, grammar-based and audio-lingual, have dominated the field. However, over the last decades of the twentieth century, a major paradigm shift away from *grammar-based* approaches toward *communicative* approaches occurred (Crawford, 2003). Grammar-based approaches, such as grammar translation and audio-lingual repetition, are based on teacher-centered direct instruction of skills, in a behaviorist paradigm. *Communicative approaches* are based on student-centered constructivist learning and take a socio-psycholinguistic perspective of language acquisition. Three important elements of constructivist second-language learning are (a) Vygotsky's (1978) *Zone of Proximal Development* (ZPD) which emphasizes problem solving with guidance from an adult or capable other at a level just beyond what the student is already capable of; (b) *scaffolding*, as first discussed (not named) by Bruner (1978), which describes a temporary support that is gradually removed with a release of responsibility from the teacher to the student (Pearson & Gallagher, 1983); and (c) *approximation*, in which ELLs imitate and test hypotheses about language, as native speakers of any language do in early

childhood (Smith, 1971). Some scholars have found a role for the study of grammar forms within a communicative approach (Dutro & Moran, 2003; Terrell, 1991).

“Scaffolding” is now a widely used term invoked in a variety of learning contexts. It may involve socially mediated learning, which Vygotsky (1978) deemed essential, or it may label any simplification of curriculum intended to promote access to more complex learning, such as the text scaffolds used in the silent repeated reading portion of this study. Vygotsky described social mediation from adult to child, or expert to novice, within the learner’s ZPD, but other authors such as van Lier (1996) have extended the contexts of a student’s ZPD to include collaboration with other learners, assisting lower-level learners (without oneself being “expert”), and working alone using internalized practices and inner speech. The use of text scaffolds in this study might alternatively be viewed as promoting and supporting internalized practice.

### **Tenets of Second Language Acquisition**

Primary tenets that underlie communicative approaches to learning a second language were developed by Stephen Krashen and Jim Cummins (Crawford, 2003). Krashen (1982b) contributed the following five hypotheses:

1. *Acquisition-Learning Hypothesis.* We *acquire* language subconsciously, along with a feel for correctness, whereas *learning* a language is a conscious process that involves grammatical rules. Gee (1992) expanded Krashen’s concept to incorporate practice within a meaningful social setting.
2. *Natural Order Hypothesis.* Grammatical structures are *acquired* in a predictable sequence. The orders for first-and second-language acquisition are similar but not identical; this does not mean that grammatical structures should necessarily be *taught* in a predictable sequence.
3. *Monitor Hypothesis.* The learner has a conscious *monitor* or editor function that makes corrections as language is produced, provided that there is sufficient time

to apply the correction, the focus is on the form or correctness of the message rather than its content, and there is knowledge of the correct grammatical rule to apply. The failure to provide these conditions explains the frequent failure of the grammar-based approach.

4. *Input Hypothesis*. Progress in language development occurs when we receive *comprehensible input*, or input that contains language structure at a slightly higher level than what we already understand, within our Zone of Proximal Development (Vygotsky, 1978).
5. *Affective Filter Hypothesis*. Affective variables such as high motivation, self-confidence, positive self-image, and low anxiety in the learning environment are associated with success in second-language acquisition, particularly during the silent period, or interval before speech production.

Cummins (2003) characterized three dimensions of language fluency: *conversational fluency*, *discrete language skills*, and *academic language proficiency*. The second dimension, discrete language skills, is a later addition to his earlier formulation (Cummins, 1979) of Basic Interpersonal Communication Skills, or BICS, which he here termed *conversational fluency*, and Cognitive Academic Language Proficiency, or CALP, which he here shortened to *academic language proficiency*.

1. *Conversational ability* with the everyday Anglo-Saxon lexicon of English, the ability to carry on a conversation in familiar, face-to-face situations, is already developed in native speakers before formal schooling begins, and generally develops in ELLs within a year or two of regular exposure to English, in or outside of a school context.
2. *Discrete language skills* are phonological, literacy, and grammatical skills that may be acquired through direct instruction and formal practice *or* through informal practice, such as reading. They progress from knowledge of the alphabet and phonics for decoding printed words; to increasing recognition of whole words, particularly those which are frequent in conversation; to conventions about spelling, capitalization, punctuation and grammar, which become increasingly complex.
3. *Academic language proficiency* is knowledge of the less-frequent Greco-Latin vocabulary represented primarily in texts *and* the ability to interpret and produce the syntactically complex and often abstract oral and written language of academic texts. It also includes understanding of the forms and functions of words as they

appear in English. A period of at least 5 years is typically required for beginning ELL students to catch up in academic aspects of English proficiency, such as reading comprehension.

According to Cummins (2003), all three dimensions are necessary and

develop concurrently, and at various stages of development will correlate with one other. However, they also behave differently from one other—with respect to when they reach a developmental plateau, to the kinds of experiences and instruction that promote each dimension, to the communicative contexts in which they are likely to be exhibited, and to the components of language on which they rely. (p. 4)

Age is also associated with second-language learning (Crawford, 2003). Lenneberg (1967) hypothesized that primary-language acquisition must occur before onset of puberty, but this does not hold for a second language. Adults develop second-language proficiency faster than children, and older children usually develop proficiency faster than younger children (Krashen, Long, & Scarcella, 1979), although young children are more sensitive to phonology and most adolescents and adults may never acquire perfect accent or pronunciation in the second language (Moyer, 1999). Two longitudinal studies done between 1977 and 1987 by Collier and Thomas (1989) suggest that it takes from 4 to 7 years to acquire native-like proficiency in a second language at school. However, 12- to 15-year-olds had the most difficulty learning English, and the authors projected they might require 6 to 8 years. The speed of acquisition correlated with degree of development of literacy and experience in school in the primary language. Lilly Wong Fillmore (personal communication, August 20, 2010), a life-long scholar of second-language learning in schools, maintains that, though individuals vary, the quality of instruction, not the school program type (biliteracy or immersion), is the critical variable. Other researchers have stretched the



estimate to 7 to 10 years, but Fillmore attributes such extended periods to inadequate instruction.

### **Similarities Between First and Second Language Acquisition**

Crawford (2003) summarized evidence for the following similarities between the acquisition of one's primary language as a child and a second language later in life. Both first- and second-language learners exhibit incomplete or incorrect speech (Selinker, Swain, & Dumas, 1975), which has alternately been termed *telegraphic speech* or *inter-language*. In the absence of sufficient exposure to native-language speakers, the inter-language may become *fossilized*, or not subject to further change, in second language learners. The development of syntax in second-language learners parallels the order of development in first-language learners (Ervin-Tripp, 1974). Learners from diverse linguistic backgrounds, such as Spanish and Chinese, acquire English grammatical structures in approximately the same order. *Interference* from the primary language has been found to be minimal (Dulay & Burt, 1974). Both first- and second-language learners show a lack of interest in abstract concepts suggesting that teachers should have students use language for pragmatic, functional purposes (Chamot, 1981). Language corrections are negative reinforcers that raise a student's affective filter (Terrell, 1982) and are no more effective for second-language students than for infants acquiring language at home. Grammar-translation and audio-lingual approaches are not consistent with these findings. Terrell (1977) championed a "natural approach" to teaching and learning a second language at school but later reconsidered the place of grammar for adult language learners; he thought that grammar could be used within a communicative approach, as an advance organizer to help adults make sense of input

(Terrell, 1991). Dutro and Moran (2003) advocate using grammar “forms” in a similar way with grade-school students, to make sense of the normal “functions” of academic language use, within a communicative setting, according to a developmental calendar for learning a second language.

### **Second Language Acquisition at School**

Communicative approaches for oral second-language instruction include Total Physical Response, or TPR (Asher, 1969) and the “natural approach” (Terrell, 1977). For second-language reading, they include a print-rich environment, the key-vocabulary approach (Veatch, Sawicki, Elliot, Flake, & Blakely, 1979), the language experience approach, or LEA (Allen, 1976), and shared reading and writing (e.g., Trachtenburg & Ferruggia, 1989). Krashen, Terrell, and others conclude that content, not grammatical sequence, should be the basis for language lessons (Crawford, 2003). At the intermediate level, access to the core curriculum of math, science, and social studies may be provided through a scaffolding process called Sheltered English Instruction (Krashen, 1982a) or Specially Designed Academic Instruction in English (SDAIE; Sobul, 1995).

Cummins (1981) presented a visual model for conceptualizing the balance of complexity of curriculum content with demands for language proficiency. Curriculum can be context-enhanced or context-reduced. Language can be cognitively undemanding (conversational) or cognitively demanding (academic). Sheltered English instruction is designed to be cognitively demanding but context-embedded, and cooperative learning (Kagan, 1993; Slavin, 1980) is emphasized.

Citing a range of research and policy reports, Cummins (2003) defends the following three assertions about second-language instruction at school:

1. The most effective approaches to developing initial reading skills . . . combine extensive and varied exposure to meaningful print with explicit and systematic instruction in phonemic awareness and letter-sound correspondences.
2. Immersion in a literate environment in school is a crucial supplement to phonics instruction in order for strong literacy skills to develop.
3. Systematic phonics instruction can enable second-language learners to acquire word recognition and decoding skills in their second language to a relatively high level . . . [but these] do not automatically generalize to reading comprehension. (p. 10)

Moreover, students vary widely in the extent to which they require and will benefit from explicit phonics instruction. These assertions show a blending of the word-recognition paradigm with the socio-psycholinguistic paradigm, recommending a “balanced” approach. Cummins (2003) cites evidence that second-language students spontaneously transfer literacy skills from their initial language of instruction to the other language, in either direction, without the need for direct phonics instruction in both languages. Over-teaching phonics may be counterproductive if it takes time away from students applying a basic phonological awareness to reading engaging texts or from beginning to express their identities through writing. There is strong evidence, Cummins believes, that the negotiation of identity is central to literacy development but has been neglected in the controversies over reading. He believes the evidence supports some use of decodable beginning-reading texts but “a near-exclusive use of [them] . . . ignores what cognitive science has discovered about the importance of encouraging children to engage in hypothesis testing and knowledge construction” (p. 19). Cummins cites *Effective Schools in Reading*, the largest international study of reading achievement and instruction ever made (Postlethwaite & Ross, 1992), corroborated by NAEP data (Pinnell et al., 1995), as robust evidence that the amount of time

students spend in voluntary reading is far more important than explicit phonics instruction and reading-comprehension strategy instruction. He re-formulates Treadway's (1997) argument that phonemic awareness, letter knowledge, and concepts about print are the strongest causal predictors of success in early reading, by showing them in relation to the contributions of a preschool literate environment and extensive exposure to varied and meaningful texts in school.

Cummins (2003) argues that it is only through extensive reading that children get access to the low-frequency vocabulary and grammatical structures that constitute the language of academic success. Nation (1993) estimated the relative proportions of high-frequency, general academic, technical, and low-frequency word families in English written text. Corresponding arguments are that an individual's low-frequency vocabulary grows slowly and requires substantial amounts of reading to learn, because there are natural limits to inferring the meaning of unknown words (Laufer, 1992; Nagy, Herman, & Anderson, 1985). Cognate connections between the first and second language, as between Spanish and English, can supplement the use of context to infer word meanings (Bear, Templeton, Helman, & Baren, 2003). Instruction in the analysis of the morphological structure of words (roots and affixes) can significantly increase students' power to infer word meanings (e.g., Biemiller, 1999). Overall, Cummins (2003) supports redirecting the focus of direct instruction from imparting word-level skills to teaching students to use texts as inputs for language learning through application of comprehension and learning strategies.

Dutro and Moran (2003) present a conceptual model for teaching academic language that operationalizes Cummins' (1979) definition of Cognitive Academic Language Proficiency (CALP). *Functions* are the cognitive tasks that drive us to connect thought

and language. Teaching ELLs to use language for a variety of academic and nonacademic purposes, or functions, is both efficient and rigorous. *Describing* people, places, or things is one example of a specific function. *Forms* are the grammatical features and specific word usages necessary for a function. The forms for a particular function progress across the range of language development. For example, the forms for a beginning ELL comparing and contrasting shapes (a function) might be limited to words for the names and numbers of shapes, while the forms for an advanced ELL might be a complex sentence such as, “Though squares and triangles are similar because they both have straight lines, a triangle is three-sided and a square is four-sided.” *Fluency*, in this case, refers to the ease of both oral and written comprehension and of the production of speech and writing, while *accuracy* is the precision and correctness of the expression. For most ELLs, receptive language precedes, and often exceeds, expressive language, but there are cases where the reverse is true, mostly for students who have studied English as a foreign language before immigrating to the United States. Therefore, teachers need to consciously model language forms and vocabulary above the students’ current expressive level, while maintaining comprehensibility.

### STAGE THEORIES OF READING DEVELOPMENT

In the 1980s and 1990s, several models were proposed for the stages children move through as they learn to read. Chall (1996), Ehri (1991), Frith (1985), and Gough, Juel, and Griffith (1992) all proposed stages of reading development. According to Stahl and Murray (1998), all these models describe three stages leading toward automatic word recognition, a key requisite for fluent reading:

1. *Visual cue reading*. The child memorizes some words by their length and shape, rather than by letter-sound relationships.

2. *Phonetic cue reading*. The child uses some letter-sound cues to narrow the range of choices for contextual guessing.
3. *Phonological recoding*. The child uses automatic knowledge of letter-sound relationships to read, using letter patterns within words. Context confirms what is read.

Ehri's (1991) model identifies these three stages as: *pre-alphabetic* or *logographic*, *partial alphabetic*, and *fully alphabetic*, concluding with a fourth, the *consolidated alphabetic* stage, during which the child "unglues from print" and comes to recognize whole words rapidly and accurately, primary characteristics of fluent reading. These stages correspond to the development of *basic fluency* (Pikulski & Chard, 2005) during which the child reads primarily in order to learn to read.

Chall's (1996) model extends attainment of basic fluency into the development of *advanced fluency* (Pikulski & Chard, 2005), when the development of comprehension becomes central. She elaborates six stages over a person's entire schooling and beyond, from emergent reading to expert reading. *Early literacy*, *conventional literacy*, and *confirmation and fluency* stages correspond to Ehri's four stages, during which the child is "learning to read." In the United States, basic reading fluency consolidates normally at second, and no later than third grade. Fuchs and her colleagues (Fuchs, Fuchs, Hamlett, Walz, & Germann, 1993) measured the development of oral reading rate and accuracy and found it to be especially rapid at second grade. Silent reading fluency continues to develop alongside text complexity, as the now fluent child shifts to "reading to learn." *Reading to learn*, *multiple viewpoints*, and *construction & deconstruction* comprise Chall's stages of reading development from third grade into maturity, which may begin in the upper elementary grades, be arrested until secondary school or adulthood, or never progress at all.

Samuels (2002), whose experiments with repeated reading (Samuels, 1979) helped establish oral text-reading fluency as an instructional domain, simplified the stages of reading development, in relation to automatic word recognition: *nonaccurate*, *accurate but not automatic*, and *accurate and automatic*.

## **STAGE THEORIES AND ENGLISH LANGUAGE LEARNERS**

Stage theory characterizes important shifts in the demands of reading, and in the role of reading for academic learning, that may affect second-language learners differentially. Chall and her colleagues (Chall, 1996; Chall et al., 1990) described how academic expectations and performance for upper-elementary students are considerably different from those of primary-grade students. Cummins (2003) cites the divide between primary and upper-elementary expectations as significant for language-minority students. Even ELLs who are successful with English literacy in primary grades may find themselves at risk when they reach upper grades. The shift from “learning to read” to “reading to learn” corresponds to Pikulski and Chard’s (2005) notions of basic and advanced reading fluency, as well as to Cummins’ characterization of the second-language learner’s shift from an initial focus on Basic Interpersonal Communication Skills (BICS) to an increasing focus on Cognitive Academic Language Proficiency (CALP). Basic fluency, attained on simpler texts containing familiar Anglo-Saxon vocabulary, may not ensure later fluency in complex texts, when syntactic and Greco-Roman vocabulary demands multiply, a divide that may put ELLs at disproportionate risk. Seminal studies by Stanovich (1986/2002), Postlethwaite and Ross (1992), and Pinnell et al. (1995) have demonstrated the importance of extensive reading for academic achievement, and Cummins (2003) regards reading as a significant input for

academic language development of ELLs. If reading is not fluent at higher text levels, it is unlikely that ELLs will read enough to satisfy upper-elementary and secondary academic demands. Farnia (2006) followed students over 6 years spanning the “learning to read” (Grades 1-3) and “reading to learn” (Grades 4-6) phases and quantified significant shifts in the variables for reading achievement between these two phases, for both native English speakers and ELLs. On the other hand, Vacca argued that the temporal distinction between “learning to read” and “reading to learn” is a matter of instructional emphasis and not a necessary developmental dichotomy (Moss, 2002).

### **INSTRUCTIONAL PRACTICES FOR ENGLISH LANGUAGE LEARNERS: ANALYSIS OF THE RESEARCH**

This section reviews research evidence for effective instruction of ELLs. Studies reporting developmental reading markers for ELLs are reported in the next section.

What is the evidence for applying theories of academic second-language development, such as the acquisition of literacy through immersion in a community practicing meaningful activities in English, or the necessity for reading as important input for learning English? Empirical studies on the English literacy development and instruction of ELLs are scant (August & Shanahan, 2008; Goldenberg, 2008), with the exception of a large body of studies focused on the nature and timing of the school-wide instructional program that best meets the needs of ELLs: dual-immersion, first-language support during instruction in English, English immersion, or some combination of these. Academic researchers of second-language learning overwhelmingly support dual-immersion or first-language maintenance during English instruction (Goldenberg, 2008). As previously stated, Wong Fillmore (personal communication, August 20, 2010) values maintenance of the first



language but maintains that the quality of English instruction is the critical variable for timely acquisition of English, irrespective of school program.

Two syntheses of the research on educating ELLs give some insight into successful English teaching and learning for language minority students. A 2-year narrative review of literature by the Center for Research on Education, Diversity, and Excellence (CREDE; Genesee, Lindholm-Leary, Saunders, & Christian, 2006) based their conclusions on about 200 quantitative studies conducted in the United States that measured outcomes in English only. A 3-year review of literature by the National Literacy Panel (NLP; August & Shanahan, 2006) based its conclusions on 300 research reports from 1980 to 2002; these included international studies and reported literacy outcomes in the first language as well. This is in contrast to thousands of studies reviewed by the National Reading Panel (NRP, 2000), which examined evidence for fluent English speakers only. The NLP studies were judged to be empirical but included those with qualitative methodologies, unlike the NRP review, which admitted only experimental, quasi-experimental, and group-comparison designs. The NLP used meta-analytic techniques when possible, narrative review when not. August and Shanahan (2008) edited a condensed, summary volume of the original NLP report (August & Shanahan, 2006). Slavin and Cheung (2003) presented a “best evidence synthesis” of 13 studies to compare bilingual and English approaches to reading. Gersten and colleagues (2007) published a practice guide for effective literacy and ELL instruction for elementary-grade ELLs that rates and explains the level of evidence for each recommendation.

Goldenberg (2008) summarized the basic findings that converged from the CREDE and NLP reviews, plus additional post-2002 studies he analyzed:

1. Teaching students to read in their first language promotes higher levels of reading achievement *in English* [than teaching them to read in English only].
2. What we know about good instruction and curriculum in general holds true for ELLs, but
3. When instructing English learners in English, teachers must modify instruction to take into account students' language limitations. (p. 14)

The first conclusion is based on a meta-analysis with 17 studies conducted by the NLP (August & Shanahan, 2006); these studies all followed students for 2 to 3 years. Studies showed effect sizes ranging from 0.2 to 0.6, with the five most rigorous studies showing the strongest effects. Four other meta-analyses (Greene, 1997; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005; Willig, 1985), plus CREDE's narrative review (Genesee et al., 2006), reached the same conclusion, which is consistent with the concept of *transfer* from the first language to the second language (Goldenberg, 2008). Reading skills or abstract concepts may be more easily learned in the first language, and transfer to the second language without additional learning time or effort in the second language. Exactly what transfers has not been measured, but candidates for skills and concepts that transfer are phonological awareness, decoding skills, as well as the concept of decoding, comprehension skills, and general knowledge concepts (background knowledge). Transfer appears to occur across languages even if the first and second languages use different alphabetic systems, but teachers cannot assume that transfer is automatic (Goldenberg, 2008).

The second conclusion, that good instruction is essentially the same for ELLs as it is for children in general, is substantiated by both the CREDE and NLP reports (Goldenberg, 2008). Many of the instructional variables reported for the success of ELLs generalize across content areas and include such things as clear goals and learning objectives and opportunities to practice, apply, and transfer new learning. Specific to literacy instruction, ELLs learning

to read in English benefit from explicit teaching of the components of literacy, such as phonemic awareness, phonics, vocabulary, comprehension, and writing (Goldenberg, 2008). Five studies reviewed by NLP, as well as two more recent studies (Vaughn, Cirino, et al., 2006; Vaughn, Mathes, et al., 2006) showed the benefits of structured, direct instruction for the early literacy skills of phonemic awareness and phonics. The NLP studies and a more recent study (Collins, 2005) provide evidence that ELLs are also more likely to learn vocabulary when words are directly taught and that they learn more words when the words are embedded in meaningful contexts with opportunity for use (Goldenberg, 2008). The NLP review found cooperative learning (Kagan, 1993; Slavin, 1980), encouragement of reading in English, discussions to promote comprehension (“instructional conversations”; e.g., Au & Jordan, 1981) and “mastery learning” to a criterion (Block, 1971) to be effective for ELLs’ reading comprehension. The CREDE report reached similar conclusions, favoring instruction that combines interactive and direct approaches, where *interactive* means instruction with give and take between teachers and learners and *direct* emphasizes explicit and direct teaching of skills or knowledge (Goldenberg, 2008). Both of these may be consistent with a word-recognition approach to reading, and the first may be consistent with a socio-psycholinguistic approach to reading, particularly if interaction includes other children. The CREDE report found, at best, mixed evidence supporting “process approaches,” where students are exposed to rich literacy experiences and literacy materials, but receive little direct teaching or structured learning (Goldenberg, 2008), as in a “pure” socio-psycholinguistic approach to reading. Chaparro (2006) reported that both ELLs and non-ELLs in Kindergarten and grade 1 made similar reading gains with literacy instruction “focused on explicit, direct, engaging instruction” (p. 98).

The third conclusion, that teachers must modify instruction to take ELLs' language limitations into account, is based on a finding from the NLP review (August & Shanahan, 2006): the impact of instructional practices or interventions is weaker for ELLs than for native English speakers (Goldenberg, 2008). For example, effect sizes for NRP (NICHD, 2000) studies of specific reading comprehension strategies taught to English speakers are much higher than corresponding studies reviewed by NLP for ELLs. The NLP studies that most benefited the reading comprehension of ELLs were those that emphasized cooperative learning, instructional conversations, and mastery learning, rather than those that taught reading comprehension strategies *per se*. Goldenberg (2008) interprets this as the consequence of the double challenge ELLs face: learning academic content and skills while learning the language in which they are taught and practiced.

In the earliest stages of learning to read . . . English learners can make progress in English that is comparable to that of English speakers, provided the instruction is clear, focused, and systematic. In other words, when the language requirements are relatively low . . . ELLs are more likely to make adequate progress, as judged by the sort of progress we would expect of English speakers. . . . As the content gets more challenging and language demands increase, more and more complex vocabulary and syntax are required, and the need for instructional modifications to make the content more accessible and comprehensible will probably increase accordingly. (p. 22)

This echoes Cummins' (2003) concerns for ELLs transitioning from lower grades, where academic language demands are low, to upper grades where academic language demands accelerate. English language learners' language limitations begin to impede their progress usually around third grade. "It is critical that teachers work to develop ELLs' oral English, particularly vocabulary, and their content knowledge from the time they start school, even as they are learning the reading 'basics'" (Goldenberg, 2008, p. 23). This is consistent with Vacca's view that a temporal dichotomy between "learning to read" and "reading to

learn” is based on historical convenience (Moss, 2002). On the other hand, Hylemon (2005) compared reading outcomes for Grade 2 through 5 ELLs in two schools, after a year of instruction in two different instructional programs, and found that Grades 4 and 5 showed significant gains while Grades 2 and 3 did not; she hypothesized that as students’ English improved, reading instruction became more meaningful and influenced outcomes in a positive direction.

These syntheses and studies illustrate that reported trends in the research on instruction of ELLs are still weakly substantiated, with interesting inconsistencies. In addition to the low number of studies addressing any one type of instruction, inconsistencies are undoubtedly explained, in part, by well-intentioned attempts to generalize across all ELLs, as if they were homogeneous in background, development, and school environment. For instance, the support for direct instruction of vocabulary (Goldenberg, 2008) apparently lies with four studies, each made with different aged children. The three NLP studies (August & Shanahan, 2008) that investigated vocabulary instruction involved first, third, and fifth graders respectively, and the post-NLP study (Collins, 2005) involved preschoolers, only one study for each age level. A post-NLP study by Filipini (2007) found that vocabulary instruction that emphasized semantic relations had larger effects on the oral-reading fluency and reading comprehension of first-grade ELLs than similar instruction that emphasized morphological awareness.

Goldenberg (2008) lists seven instructional modifications for ELLs that have been proposed, some with support from research, others reflecting common sense but not yet validated empirically:

1. *Making text in English more comprehensible* by using texts with content that is familiar to students. There is support for this in the NLP literature, but the support also generalizes to non-ELLs.
2. *Using the primary language for support*: Translating has obvious downsides. “Preview-review” has research support from one NLP-reported study and one other (Fung, Wilkinson, & Moore, 2003). English language learners are gathered by the teacher to preview, and later review, whole-class instruction using their primary language as support. Focusing on the similarities and differences between the two languages, as in cognate awareness, makes sense but has no empirical support.
3. *Supporting ELLs in English-only settings*—most of the suggested supports are generic, not obviously tailored to ELLs. No research support is given except for “targeting both content and ELL objectives in every lesson,” the hallmark of the Sheltered Instruction Observation Protocol, or SIOP (Echevarria, Vogt, & Short, 2004). One study has offered weak support for this, in the domain of writing (Zehler et al., 2003).
4. *Assessing knowledge and language separately*. Research illustrates how results are confounded when this is not followed. If a task is beyond the child’s English language ability, its assessment may falsely conclude that the child has no knowledge to bring to the task. For instance, a child asked to say a word that rhymes with “cake” may not respond because she does not know a rhyming word in English, or does not know the English label “rhyme,” with the false conclusion that she cannot rhyme.
5. *Accommodating instruction to cultural learning styles* has a dubious research basis.
6. *Promoting productive interaction among ELLs and English speakers* has a dubious research basis.
7. *Adding time* (hours in the day, days in the year, or extra years to reach a diploma) makes sense but has no research base.

A list of supports (Goldenberg, 2008) for instruction in English, includes a variety of routines, visuals/graphics, and redundant or extended information and opportunities for practice; adjusting instruction to match student’s oral proficiency; and targeting both content and English language objectives. Goldenberg (2008) summarizes the practical implications of the research:

1. If feasible, children should be taught reading in their primary language.
2. Children should be helped to transfer what they know in their first language to learning tasks presented in English.
3. Teaching in the first and second languages can be approached similarly, but adjustments or modifications will be necessary.
4. English language learners need intensive oral English language development (ELD), especially vocabulary and academic English instruction.
5. English language learners need content instruction (p. 42).

### **DEVELOPMENT OF READING SKILLS IN A SECOND LANGUAGE**

The NLP (August & Shanahan, 2006) reported separately on studies of (a) development of literacy in language-minority students; (b) cross-linguistic relationships between first and second languages; (c) sociocultural contexts and literacy development; (d) instruction and professional development for literacy; and (e) student assessment. This section highlights their key findings about reading development in language minority students in the chapter by Lesaux and Geva (2008), plus several subsequent contributions, whereas the preceding section reported conclusions from NLP studies of instructional practices.

The NLP (August & Shanahan, 2006) looked at evidence for (a) differences and similarities between language-minority and native speakers, internationally, in the areas of phonological processing, print awareness, word reading skills, spelling skills, reading comprehension, and writing; (b) factors that have an impact on the literacy development of language-minority children and youth in word reading, spelling, comprehension, and writing; (c) the relationship between English oral proficiency and English word-level literacy skills; and (d) the relationship between English oral proficiency and English text-level literacy skills

(Lesaux & Geva, 2008). The studies were not limited to the United States, to English as the second language, or to students with limited proficiency in the second language. In contrast to the National Reading Panel study (NICHD, 2000) of non-ELLs, which allowed only experimental and quasi-experimental designs, the bulk of NLP studies on literacy development of language-minority students used correlational designs, and a number of those comparing language minority students with native speakers used between-group designs. Narrative review, or description of studies, was used where meta-analysis was untenable. The NLP used meta-analytic techniques where five or more independent studies were available to analyze an issue, but there were only two instances where this criterion was met (Lesaux & Geva, 2008).

The most salient and consistent finding across these studies is the overall paucity of developmental research, the one exception being those studies that have been conducted to examine the literacy development of elementary school students, mostly children in the primary grades . . . allow[ing] us to draw relatively firm conclusions about the word reading development of language-minority children and youth. . . . A second finding is the limited amount of research focused on text-level skills. (Lesaux & Geva, 2008, p. 34)

### **Phonological Skills**

Lesaux and Geva (2008) reported that most studies reviewed by NLP (August & Shanahan, 2006) indicate that second-language learners perform as well or better than monolinguals on phonological tasks, but the relationship is not simple and depends on a variety of factors including the learner's age or stage of second-language development. Reading readiness, including measures of phonological skills, predicted aspects of later second-language reading development regardless of whether the measures were in the student's first or second language, providing evidence for transfer from first to second



language. Language minority students in the primary grades who were classified as having difficulties in spelling or reading also demonstrated difficulties in phonological awareness comparable to those of their monolingual peers who were similarly classified. English language learners and native English speakers with difficulties in reading and spelling did not differ in rapid-naming ability, a measure of phonological recoding.

### **Print Awareness**

A single study reviewed by NLP found that bilingual learners were better than monolingual children in their understanding of the general symbolic properties of written English (Lesaux & Geva, 2008).

### **Word Reading**

The NLP reviewed studies across different countries, ages, and ability levels, and found that, with sufficient exposure to second-language reading, word-reading skills of LM students appeared to develop at a level equivalent to those attained by monolingual students, even though LM subjects usually performed more poorly on measures of oral language proficiency, such as syntactic awareness and vocabulary (Lesaux & Geva, 2008). This suggests a basis for the label of “word calling” in ELLs (see Concept of Fluency below). However, none of the studies reviewed included a measure of speed of word reading. A meta-analysis of 10 studies confirmed little or no difference between LM students and native-speaking peers on measures of word- and pseudo-word-reading accuracy. Studies examining word-reading and spelling disabilities in primary, upper-elementary, and middle school students showed a similar range of abilities for ELLs and native English speakers, although disabled ELLs in the three middle school studies had superior phonological skills, suggesting

heightened meta-linguistic awareness. Overall, the NLP research base suggests that word-reading ability is more closely related to phonological skills than to language-minority status (Lesaux & Geva, 2008).

Nine NLP (August & Shanahan, 2006) studies identified a cluster of competencies in the second language that underlie initial second-language word reading development. These are essentially identical to those for monolingual English-speaking children: phonological awareness, knowledge of sound-symbol correspondence rules, letter knowledge, and working memory (Lesaux & Geva, 2008).

Over a variety of different types of studies reviewed by NLP (August & Shanahan, 2006), phonological processing skills and measures of working memory in English tended to be more consistent predictors of English word and pseudo-word reading and explained a larger proportion of the variance than measures of English oral language proficiency (Lesaux & Geva, 2008). However, these authors caution against overgeneralization. Only one of the studies focused on ELLs at the high school level and, there, positive correlations were found between oral language proficiency and word reading as well as between oral proficiency and phonological awareness. The relationship between English oral-language proficiency and English word reading is influenced by type of assessment (Lesaux & Geva, 2008). In some studies, the lack of relationship between English oral-language proficiency and word reading may be due to a restriction in range in the measure of oral proficiency, particularly for younger students. Some oral skills, such as lexical knowledge, may be more related to word reading than others, such as syntactic knowledge. Bivariate relations between predictors, such as phonological awareness and oral proficiency, and outcomes, such as word reading skill, are often confounding.

## **Spelling**

The NLP (August & Shanahan, 2006) findings suggested that, over time, ELLs may accomplish a level of English spelling proficiency equivalent to those of native English speakers (Lesaux & Geva, 2008). Nine studies taken together suggested that factors associated with spelling performances in a second language are similar to factors associated with word reading and that word reading and spelling skills are highly correlated. Two studies reported that English spelling errors in Spanish-English bilingual children reflected their use of Spanish sound-symbol correspondences.

The NLP (August & Shanahan, 2006) tentatively concluded that grammatical skills in English were not strongly related to spelling skills for elementary- and middle-school ELLs and that “little can be said” (Lesaux & Geva, 2008, pp. 45-46) about the relationship between English oral-language proficiency and English spelling, or between phonological processing and English spelling, at higher grades. English language learners and native English speakers in lower grades who have similar spelling performances, whether good or poor, have similar phonological processing skills, despite differences in English oral proficiency.

## **Reading Comprehension**

Five Dutch studies reviewed by NLP (August & Shanahan, 2006) compared performance in LM students with native-speaking peers; first- through eighth-grade LM students in Dutch schools generally underperformed their native Dutch-speaking peers (Lesaux & Geva, 2008). The authors of NLP state, “We know little about the quality of curriculum and instruction in these [reading comprehension] studies. Existing large-scale data sets on the school achievement of language-minority students in the United States and

abroad suggest that comprehension is a significant area of difficulty for these learners” (Lesaux & Geva, 2008, p. 41). Many NLP studies reporting on reading comprehension did not describe specific demands of the text or task, limiting interpretation. Individual factors that influence second-language reading comprehension appear to be readiness skills, word-level skills, background knowledge, and motivation; contextual variables appear to include socioeconomic status and text attributes.

Although length of time in the country and instruction are likely to have an influence on reading comprehension for LM students, there is little evidence available to examine their influence . . . [and] many of these studies . . . [have] no comparative sample of native speakers so we cannot determine whether the impact of these factors varies according to language status. (Lesaux & Geva, 2008, p. 43)

In 10 studies examined by NLP (August & Shanahan, 2006), components of English oral-language proficiency were associated with English reading comprehension for second-language learners: vocabulary knowledge, listening comprehension, syntactic skills, and the ability to handle meta-linguistic aspects of language such as providing definitions of words (Lesaux & Geva, 2008). Four studies with elementary- and middle-school students showed that ELLs with limited vocabulary knowledge had low levels of reading comprehension, and ELLs with a large repertoire of high-frequency and academically relevant words were better able to process written texts. Differences in English reading comprehension of ELLs also relate to a variety of individual factors, ranging from word reading skills and first-language reading skills, to contextual factors such as socioeconomic status, and to instructional/educational factors (Lesaux & Geva, 2008).

Additional comparisons of L2 reading comprehension with other reading markers come from several post-NLP studies. Both Ayre (2007) and Windmeuller (2004) found

strong correspondences between oral-reading fluency, word-use fluency, and ELD in Grade 1 to reading comprehension and other literacy measures at Grade 3. On the other hand, Yoro (2007) found that oral-reading fluency in terms of Words Correct Per Minute (WCPM) was not a strong predictor of reading comprehension proficiency in 248 Grade 3 Latino ELLs in a reading grant program. “The results did, however, support the predictive power of well-developed academic vocabulary knowledge and skills” (Yoro, 2007, p. xii).

### **Reading Fluency**

No studies of reading fluency were reported by NLP (August & Shanahan, 2006) for language minority students. The authors concluded, “More research is needed on how reading fluency in ELLs influences reading comprehension . . . [and] to examine precursors to reading fluency and instructional practices that can enhance reading fluency in ELLs across the school years” (Lesaux & Geva, 2008, p. 49). Although *oral-language proficiency*, *phonological processing*, *working memory*, *word-level skills*, and *text-level skills* were defined or elaborated, no definition of *reading fluency* was offered.

### **Patterns of Reading Growth in L1 and L2**

Larsen (2006) tracked reading data for 15 ELLs from Grade 1 to Grade 6 and reported relationships between oral-reading fluency over time and reading comprehension over time. She found moderately strong correlations between oral-reading fluency at Grade 1 and Grade 6, and moderately strong correlations between reading comprehension at Grade 3 and Grade 6, but all 15 students had average or lower scores for comprehension by Grade 6, even those whose reading markers at Grade 1 indicated they were likely to do well. Other recent evidence comparing the development of English literacy in native speakers and ELLs comes

from a 6-year longitudinal study in Canada reported by Farnia (2006). This study used growth modeling and hierarchical linear modeling to study the contributions of phonological processing, orthographic processing, oral language proficiency, and reading fluency (accuracy and automaticity) to reading comprehension in 107 ELLs, representing four home languages, along with 50 native English speakers. Overall, Farnia (2006) found that native-English speakers and ELLs, regardless of achievement level, showed similar individual reading-development trajectories (patterns of growth) from Grade 1 to Grade 6. In Stage 1, from Grade 1 to 3, ELLs outpaced their English-only peers in growth of word-level reading and kept pace with them in reading fluency and comprehension, in spite of lower performances on measures of oral-English proficiency. As predicted by Chall's (1996) stage theory, and consonant with Cummins' (2003) observations, this picture changed during Grades 4 to 6: Oral-language proficiency became a significant concurrent and longitudinal predictor of reading comprehension. Children of both language groupings who were able to read isolated words readily at the end of Grade 3 made similar growth from Grade 4 to 6 in text-reading fluency and comprehension. For both groups, spelling ability predicted text-reading fluency at beginning of Grade 4 but isolated-word-reading ability predicted text-reading fluency at end of Grade 6. Text-reading fluency grew at a faster rate in ELLs who had higher reading comprehension at the beginning of Grade 4 *and* the faster both ELLs and native-English children developed their text-reading fluency, the greater their comprehension was at the end of Grade 6.

Taken together with the NLP studies (August & Shanahan, 2006), Farnia's (2006) work suggests that the greatest contribution to learning to read in a second language may come initially from development of word-level skills, such as phonological awareness and

spelling, but ultimately rests on the degree of meaningful, contextualized development of oral proficiency, text-reading fluency, and reading comprehension in the second language. This appears to lend further support to the concern of Cummins (2003) and others that underlying vocabulary and conceptual development in the second language, particularly academic language, is the limiting challenge for second-language learners learning to read and reading to learn. It is also consistent with calls for “balanced” literacy instruction blending word-recognition approaches with socio-psycholinguistic approaches where students are immersed in a rich array of meaningful texts.

## **THE CONCEPT OF READING FLUENCY**

In this section, the term *reading fluency* and related concepts are explored in more detail than in Chapter 1.

### **Reading Fluency**

Many variations on the meaning of “reading fluency” abound in research and practice literature, including everything from the National Reading Panel’s (NICHD, 2000) “the immediate result of word recognition proficiency” (p. 3) to Wolf and Katzir-Cohen’s (2001) “unsettling conclusion . . . that reading fluency involves every process and sub-skill involved in reading” (p. 220). The 2002 NAEP Special Study of Oral Reading (Daane et al., 2005) reserved the term “fluency” for the expressiveness of a student’s oral reading, and used alternate terms for the characteristics typically cited for reading fluency: accuracy and speed of word recognition. “Fluency” has been applied not only to the reading of text but to the smooth, easy reading of isolated words and even to the ease and speed of listening-and-answering tasks demonstrating phonemic awareness (Good, Simmons, & Kame’enui, 2001).

As stated in the Introduction, Kame'enui and Simmons (2001) characterized *reading fluency* as eidomine, a term so vague as to be of almost no use at all. "Reading fluency, as a construct, does not enjoy definitional, theoretical, empirical, or instructional consensus in the research literature" (p. 204). However, they defended the notion of reading fluency as something intuitively real, deserving researchers' continued efforts to understand and operationalize it.

For purposes of this study, "reading fluency" will follow a comprehensive working definition offered by Pikulski (2006), based on an earlier definition by Pikulski and Chard (2005):

Reading fluency is a developmental process that refers to efficient, effective decoding skills that permit a reader to comprehend text. There is a reciprocal relationship between decoding and comprehension. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent-reading comprehension. (p. 73)

In the following section, various terms comprising this definition are explored.

## **Decoding**

In its narrowest sense and most common usage, *decoding* refers to the chain of cognitive events from the fixation of the eye upon a word to its internal or external *recoding* as an accurate phonological representation (Perfetti, 1985). As such, it is closely associated with *word recognition*. Decoding often implies word recognition with effort, rather than spontaneous (automatic) retrieval from memory associated with fluent reading, and it often implies the automatic association of word meaning. Word recognition *accuracy*, often measured as Word Correct Per Minute (WCPM), is the measure of this aspect of fluency. Decoding refers more rarely to the cognitive processes leading to understanding of *any*



conventions of text, including sentence, paragraph and text-level structures, such as story grammar or allegory.

### **Rate**

Reading fluency is most often characterized in terms of the speed and accuracy of words read, its manifestation in oral speech. Kame'enui and Simmons (2001) contend that, in practice, many teachers refer to accuracy of word recognition alone as “fluent” reading, without reference to the *rate* of word recognition. Working memory is essential to meaningful reading, and reading rate may affect the capacity of working memory; slow readers may not be able to hold essential information long enough to make full meaning of what they read.

### **Prosody**

*Prosody* is the dimension of oral reading associated with pitch and time variables reflected in vocal emphases and phrasings that contribute to expressive reading. It can be directly measured from recorded sound-wave files (e.g., Cowie, Douglas-Cowie, & Wichmann, 2002; Miller & Schwanenflugel, 2006) or indirectly measured by raters from rubrics (Pinnell et al, 1995; Rasinski, 2008). Prosody may be the link between fluency and comprehension because it provides cues to an otherwise invisible process (Kuhn & Stahl, 2004). Rasinski (2000) refers to the phrase, not the word, as the natural unit of meaning in reading. As an instructional method, reading for performance capitalizes on the association of prosody with comprehension. This relationship is explored further in a following section.

## **Fluency Development**

The developmental nature of reading fluency is two-fold. It refers, on the one hand, to the development of sub-skills that underlie effortless reading (Ehri, 1991; Wolf & Katzir-Cohen, 2001). On the other hand, it refers to changing skill demands for smooth, effortless reading as texts become increasingly academic and complex (Chall, 1996) and as maturing readers extend the vocabulary and syntax of their native or second language (Cummins, 2003). Both senses, with emphasis on the first, are reflected in this comprehensive definition by Wolf and Katzir-Cohen (2001):

In its beginnings, reading fluency is the product of the initial development of accuracy and the subsequent development of automaticity in underlying sub-lexical processes, lexical processes, and their integration in single-word reading and connected text. These include perceptual, phonological, orthographic, and morphological processes at the letter, letter-pattern, and word levels, as well as semantic and syntactic processes at the word level and connected-text level. After it is fully developed, reading fluency refers to a level of accuracy and rate where decoding is relatively effortless; where oral reading is smooth and accurate with correct prosody; and where attention can be allocated to comprehension. (p. 219)

“Fully developed,” however, is relative, as fluency varies with varying level of text demands, and can continue to develop into maturity, along with the complexity of encountered texts (Chall, 1996).

## **Reading Comprehension**

*Reading comprehension* is a broad construct that includes literal, inferential, and interpreted meanings accrued during the reading of text. It can be measured directly, through questioning or retell procedures, or indirectly. A large body of reading-intervention research uses the manifestation of reading fluency, speed, and accuracy of word recognition, as the best practical, but indirect, measure of reading comprehension (Fuchs et al., 2001; Marston,

1989; Riedel, 2007). It is popular to conceive of reading comprehension as a transaction of understandings (Rosenblatt, 1978), across space and time, between the author, whose intended meanings may never be known and the reader, who brings an interpretation to the author's words based on her own experiences. Regardless of the depth and breadth of transaction that occur between text and reader, without comprehension there is no reading, only "word calling," the serial recognition of words without any sense of what the assembled text is about. Word calling is addressed below. *Metacognition* is the aspect of comprehension that involves the reader's self-awareness of whether he understands what he is reading; active self-monitoring of comprehension differentiates skilled and unskilled readers (Samuels, 2006).

### **Automaticity**

*Automaticity* is a key construct in the theoretical understanding of reading fluency. It has often been used as a stand-in for the term "fluency" and there is an historical blurring of the two terms (Kame'enui & Simmons, 2001). Automaticity in reading refers to rapid, context-free recognition and retrieval of word information and is the phenomenon that makes smooth, easy reading possible. The cognitive processes underlying automaticity have been elaborated in several theories. These are reviewed below.

### **Word Calling**

*Word calling* refers to the ability of some readers to recognize words quickly and accurately without being able to demonstrate that they understand what they have read. Stanovich (1986/2002), referring to students in the general population, thought that word calling was ill-defined, rare, and over-reported by teachers. Perfetti, Yung, and Schmalhofer

(2008) cite five later studies which demonstrate word calling in both children and adults. As previously stated, Kame'enui and Simmons (2001) observed that many teachers use oral word-reading accuracy as the sole indicator of reading fluency, irrespective of the reader's rate, expression, or comprehension. It is possible for primary-grade ELLs' knowledge of English phonics and sight-words to exceed their understanding of English word meanings (Cummins, 2003; Freeman & Freeman, 2003); this is particularly true if they are over-taught in a word-recognition paradigm without adequate exposure to meaningful whole-text activities in English. Forms of reading instruction and assessment that recognize a comprehensive definition of reading fluency, with dimensions of expression and comprehension, argue against the danger of mistaking word calling for fluent reading.

## **AUTOMATIC PROCESSES OF READING**

This section examines theory and evidence from cognitive science about *automaticity* in reading. Automaticity is the phenomenon that makes smooth, easy reading possible.

### **Automatic Information Processing Model**

The theoretical basis for repeated reading practice lies with models of automatic cognitive processing of information, dominated by the Automatic Information Processing Model (LaBerge & Samuels, 1974; Samuels, 2004, 2006). This model has five major components: visual memory, phonological memory, episodic memory, semantic memory, and attention. The attentional component is frequently cited in the reading literature. According to the model, a reader's internal attention is characterized by alertness, selectivity, and limited capacity. In a linear, "bottom up" fashion, the visual features of letters such as lines, curves, and angles are perceived first and "unitized" into larger and larger features of text: letters,

letter groupings, and words. Since the reader's attentional resources are limited, the larger the recognized units are, and the faster the units are recognized, the more attention can be devoted to higher, or "top," levels of cognitive processing, those we associate with text comprehension. If most of a reader's attention is directed at effortful unitization, or decoding, of words, there is little available to make meaning of the text. According to the model, letter encoding has to be automatized before word reading can be automatized, and word reading must be automatized before comprehension can take place. This feature of LaBerge and Samuels' model places it in contrast to "top down" models of reading, in which context drives lower-level (letter/word) processing, and to "interactive" models (e.g., Rumelhart, 1994; Stanovich, 1980), in which perceptions of context and lower-level processing prime each other. According to the Automatic Information Processing Model, the ability to recognize words quickly and automatically is a requisite for comprehension. The instructional practice of repeated reading, introduced by Samuels (1979/1997), is based on the idea that each re-reading speeds up the unitization process until the words are recognized wholly and rapidly without effort, freeing the reader's attention for text comprehension. Samuels, Bremer, and LaBerge (1978) provided experimental evidence for the development of unitization, while Dahl and Samuels (1979) provided evidence for increased comprehension of texts read repeatedly. Samuels (2006) emphasized that "comprehension is not a unitary skill . . . when fluent readers simultaneously decode and comprehend, it may be only for the lower level aspects [such as a literal understanding] of this multifaceted process" (p. 35).

## **Verbal Efficiency Theory**

Perfetti's (1985) Verbal Efficiency Theory (VET) characterizes *word reading automaticity* as *vocalization latency*, the time it takes to read an isolated word aloud, and assumes that decoding skill is the major source of variation in vocalization latency. Hogaboam and Perfetti (1978) demonstrated that skilled comprehenders had faster automatic word recognition skills than less skilled comprehenders, consistent with LaBerge and Samuels' characterization of limited attentional capacity. Stanovich (1980) reported that the speed of pseudo-word naming, which is dependent on sub-lexical decoding, is one of the tasks that most clearly distinguishes skilled from unskilled readers, consistent with Perfetti's VET model. Perfetti et al. (2008) have also reported that "word calling," rapidly and accurately reading words without overall comprehension of the text, is a real phenomenon in some children and adults.

## **Instance Theory of Automatization**

Logan (1997) explained the nature of the process of developing automaticity in reading as the acquisition of memory traces, or instances, of textual features, which he calls the Instance Theory of Automatization. Automaticity of tasks, in general, is usually characterized by four properties: speed, effortlessness, autonomy, and lack of conscious awareness. Reaction time to a stimulus, such as a printed word, decreases as a function of practice until a limit is reached; this power function explains why high-frequency words are read more rapidly than low-frequency words. If two tasks can be done at once without interference, then at least one of them must be automatic. Experimental evidence for interference effects demonstrates that automatic processing begins and runs to completion

without intention. Phenomenal reports, or subjective description of experiences, suggest that automatic processing is not available to consciousness, but this has been difficult to prove experimentally. The four properties (speed, effortlessness, autonomy, and lack of conscious awareness) are not always co-occurring and therefore “automaticity is viewed by many as a continuum rather than a dichotomy, so that one process may be more automatic than another but less automatic than a third . . . performance after an intermediate amount of practice may be somewhat fast, somewhat effortful, somewhat autonomous, and partially unconscious” (Logan, 1997, p. 5).

According to Logan (1997), the most common mechanism postulated for development of automaticity, consistent with LaBerge and Samuels’ 1974 model, is the strengthening of connections between “stimulus” and “response” elements, in keeping with a behaviorist model of learning. “Practice makes connections stronger and, consequently, performance is faster and less effortful” (Logan, 1997, p. 6). Chunking theories postulate mechanisms that “chunk” stimulus and response elements so that complex stimuli are perceived and responded to as single units in a single processing step, consistent with LaBerge and Samuels’ notion of unitization. “Performance is faster and less effortful because the number of steps is reduced” (Logan, 1997, p. 6). Logan’s own idea, which he likens to a paradigm shift, is that the learning mechanism is episodic memory rather than algorithmic computation. “Each experience with a task lays down a separate memory trace or instance representation that can be retrieved when the task repeats itself. The number of instances in memory grows with the number of practice trials” (p. 6). Performance is automatic when it is based on retrieval of past instances and automatic performance is more likely the more task-relevant instances are in memory. “Automatic performance is fast and

effortless because memory retrieval is faster than algorithmic performance and involves fewer steps” (p. 6).

Logan’s instance theory (1997) has three main assumptions: *obligatory encoding*, *obligatory retrieval*, and *instance representation*. Obligatory encoding means that attention to an object or event is sufficient to cause it to be encoded into memory as a “trace.” This is the learning mechanism, and the main evidence for it is the equivalence of incidental and intentional learning. A trace is all-or-none, so, in theory, learning can occur with a single exposure to an object or event. Obligatory retrieval means that attention to an object or event is sufficient to cause things that were associated with it in the past to be retrieved. This is responsible for the expression of automaticity in performance, and the main supports for it are studies of interference effects, when people are unable to “turn off” reading even when it is in their best interests to do so. Instance representation says that each trace, or instance, of past objects and events is encoded, stored, and retrieved *separately*, even if the object or event has been experienced before, a notion which is counter-intuitive for many people. Retrieval involves a race between the different traces in memory. “The more traces there are, the more likely it is that one trace will be retrieved exceptionally quickly. Practice increases the number of traces being retrieved, and this accounts for the speed-up” (Logan, 1997, p. 8), with diminishing returns, however, resulting in the negative acceleration of the power function. Logan cites evidence that specific quantitative predictions made from mathematical modeling have held up very well in experiments and that instance theories have provided better accounts of memory and retrieval data than strength theories and prototype (schema) theories.



Instance theory (Logan, 1997) states that performance is primed, or automatized, if it is based on retrieval of past solutions in memory instead of algorithmic computation. This has important implications for reading. Learning can occur in a single trial but automaticity usually builds up gradually as more and more traces are added. However, single-trial automatization makes it possible for automaticity to appear at every level: letters, words, propositions, and ideas. Since the probability of repetition is lower the higher the level of processing, connection-strengthening models of learning would not predict this. *Repetition priming* is an experimentally observed memory phenomenon and shares three characteristics with automaticity; they are both item-based, associative, and show the power-function speedup; Logan (1990) interpreted automaticity as massive repetition priming. Logan reviews experimental demonstrations of automaticity in letter-level, word-level, and text-level processing consistent with massive repetition priming, not stimulus-response strengthening. The pedagogical method of repeated reading (Samuels, 1979/1997) allows for repetition priming. Reading rate accelerates over the first few readings and then levels off. Under some experimental conditions, text-level processing (sentence level and higher), rather than letter or word-level processing, has been shown to be responsible for the speed-up.

According to Logan (1997), the clearest message from instance theory is that reading practice is necessary and repetition is good. He believes that some variability in the practice regime is beneficial as well but states that research so far cannot suggest an optimal mixture of old and new reading material. “On the one hand, it is clear that transfer will be better the greater the proportion of old material. On the other hand, the greater the proportion of new material, the greater the opportunity to learn. In either case, it would be better to maximize the similarity of new and old material” (Logan, 1997, p. 11). Dahl and Samuels’ 1979 study

offered support for the former while Fluency Oriented Reading Instruction (FORI) studies utilizing “wide reading” of similar, but not identical, texts (Kuhn et al., 2006) offered support for the latter. According to Logan (1997), the transfer between oral and silent reading should be excellent, as motoric factors play a small role in the automatization of cognitive skills (Logan, 1990), and the main difficulties in reading are pre-motor. Skilled readers may find it easier to comprehend things they read silently because silent reading is faster and closer to the rate at which they think. “Most likely [during repeated reading] automatization is going on at several different levels. Over repetitions, readers learn specific words and specific combinations of words as well as the meaning of the text” (Logan, 1990, p. 12). Since reading for meaning is a complex activity,

Perhaps the most important effect of the repeated reading method is to teach readers how to solve . . . the problems of coordination and control. Multiple repetitions ensure that most of the problems get solved, for a particular text. Hopefully, there are some similarities among the solutions to these problems with different texts, so that the training can transfer. (Logan, 1990, p. 12)

Kuhn and her colleagues (2006) thought that instance theory helped explain their experimental finding that fluency-oriented instruction based on wide reading was as effective for second graders as fluency-oriented instruction based on repeated reading. It is important to note that the texts for the wide-reading version of the intervention were classroom basal selections congruent with the texts chosen for the repeated-reading version of the intervention and therefore carefully controlled, not unrestricted free reading as is sometimes associated with the term *wide reading*.

Samuels (2004) characterized memory-based mechanisms of automaticity in reading described by Anderson (1982), Logan (1988), and Stanovich (1990) as “a useful addition to work in the field because they explain the mechanism by which attention can be withdrawn

from a problem [i.e., by switching from effortful, algorithm-based decoding to efficient memory-trace retrieval]” (p. 1148); however, he maintained the usefulness of the attentional-resources construct.

## **THE RELATIONSHIP OF READING FLUENCY TO COMPREHENSION**

This section examines evidence that components of reading fluency, such as rate, accuracy, and prosody, are related to reading comprehension. Comprehension is the “goal,” or assumed outcome, of reading; without comprehension there is no reading. Reading comprehension has both empirical and theoretical relationships with reading rate and accuracy, as well as with prosodic reading.

### **Rate and Accuracy**

Slow reading is empirically associated with lower reading comprehension (Daane et al., 2005; Fuchs et al., 2001; Pinnell et al., 1995), and less reading is theoretically associated with reduced access to academic learning for ELLs (Cummins, 2003). For readers in primary grades, or for older struggling readers, when the texts of instruction are simple and the primary cognitive challenge is learning to read rather than reading to learn (Chall, 1996), a large body of research indicates that reading rate and accuracy, measured as Words Correct per Minute (WCPM) is a reliable proxy measure of reading comprehension (Fuchs et al., 2001; Marston, 1989; Riedel, 2007). These studies have focused on reading-impaired children; some have reported on ELLs (Baker & Good, 1995; Graves, Plasencia-Peinado, Deno, & Johnson, 2005; Wiley & Deno, 2005). Yoro (2007), on the other hand, found that oral-reading fluency, in terms of WCPM, was not a strong predictor of reading

comprehension proficiency in Grade 3 Latino ELLs. Other scholars, such as Samuels (2007) and Rasinski (2000) recognize the importance of speed for efficient, meaningful reading but caution that, in practice, too much emphasis on speed is detrimental to comprehension, and that comprehension should never be assumed. For older readers, oral reading fluency is often assumed to reflect silent reading fluency, but comprehension in fluent older readers may actually be impaired by reading out loud (Logan, 1997).

### **Mutual Facilitation**

Two empirical studies have shown that oral text-reading fluency both reflects comprehension and contributes to comprehension in elementary-grade children (Farnia, 2006; Miller & Schwanenflugel, 2006). Farnia's (2006) study used a measure of rate and accuracy and included ELLs. Miller and Schwanenflugel's (2006) study measured prosodic variables in the oral reading of fluent English speakers.

### **Contribution of Prosody**

Prosodic reading goes beyond accurate word recognition and reflects, in word emphases and phrasings, the recognition of meaningful syntactic structures. Kuhn and Stahl (2004) thought that prosody might be a link between fluency and comprehension because it provides cues to an otherwise invisible process. Adherence to the author's intended syntactic conventions, demonstrated by prosodic oral reading, requires the reader to be aware of the ideas that are expressed in the text. In the two large NAEP studies (Daane et al., 2005; Pinnell et al., 1995), text-reading fluency that included a prosodic or expressive dimension was shown to have a strong relationship with reading comprehension; in these studies prosody was rated using rubrics and included language minority children but not ELLs.

In order to read prosodically, a reader must be aware of syntactical phrasing and grammatical structures, but the degree to which prosody is an outcome of comprehension or contributes to comprehension is not well established. In two studies of primary-grade children, prosody did not appear to mediate comprehension when a text was composed of simple sentence structures (Schwanenflugel, Hamilton, Kuhn, Wisenbaker, & Stahl, 2004), but did have an independent effect on comprehension when the text was composed of more complex structures (Miller & Schwanenflugel, 2006). These studies used direct, physical waveform measurements of prosodic features. A preliminary study concluded that poor comprehenders in Grade 5 appeared to have language-processing difficulties relating to awareness of grammatical structures (Mokhtari & Thompson, 2006). None of these prosody studies included ELLs.

### **Word Calling**

Mokhtari and Thompson's study (2006) was interested in the population of children who decode appropriately at the word level but are otherwise poor readers. Similarly, some ELLs are described as "word callers," efficient word decoders who do not comprehend what they read, whom some might label "fluent." Stanovich (1986/2002), assuming proficient English speakers, argued that word calling is poorly defined and therefore potentially confounded by other factors, and that there is no reliable evidence that it is commonplace. Kame'enui and Simmons (2001) contended that, in practice, many educators refer to accuracy of word recognition alone as "fluent" reading, without reference to the *rate* of word recognition. Perfetti and his colleagues (2008) have demonstrated experimentally and theoretically that it is possible to recognize words readily and quickly without understanding

what is being read. All reading, whether oral or silent, is phonologically represented in working memory (Perfetti, 1995). It is possible to have phonological representation of words in working memory without retrieval of corresponding lexical understandings from long-term memory. For mature readers, the phonology of common phrasings, as well as words, might be “called” without whole-text understanding, for instance, when reading an unfamiliar text aloud under duress. Nevertheless, a definition of fluency that includes prosodic reading and comprehension argues against the dangers of using accuracy, or rate and accuracy, as the sole indicator(s) of reading fluency, particularly in older children.

### **FLUENCY-TARGETED READING INSTRUCTION**

Classroom and clinical oral reading practices that target oral text-reading fluency have shown positive effects on fluency and comprehension markers for proficient English speakers in elementary and middle school (Kuhn & Stahl, 2004) and have the potential to close achievement gaps for low-performing children. This section summarizes the research base for repeated reading in the English speaking population, performance reading in the English speaking population, and ELLs overall.

#### **Repeated Reading**

Samuels first described the method of *repeated reading*, based on his theory of automaticity (LaBerge & Samuels, 1974), as adjunct instruction for poor readers in elementary school (Samuels, 1979/1997). At that same time, C. Chomsky (1976) developed the method of *assisted reading*, in which a student’s reading is assisted by the voice support of a fluent reader. Two decades later, the National Reading Panel (NICHD, 2000) conducted a meta-analysis on “guided oral reading” studies that had employed experimental methods.

These included a range of instructional practices variously described as repeated reading, assisted reading, impress reading (Heckelman, 1969), paired reading, and shared reading. They found an overall effect size of 0.41 for these studies, with significant effects for individual measures: 0.53 for reading accuracy, 0.44 for reading fluency, and 0.35 for reading comprehension. The broad range of instructional methods cautioned against overgeneralization about any one, but overall, oral reading instruction appeared to the NRP to be valuable; they recommended oral reading fluency as one of five pillars of reading instruction.

Kuhn and Stahl (2004) refined the NRP review to studies that had targeted students' oral text-reading fluency and used rate and accuracy (WCPM) as the outcome; some studies had also reported comprehension or prosody as outcomes. They used narrative review and vote-counting procedures to analyze 58 studies dealing with unassisted repeated reading, assisted reading, classroom extensions of assisted reading, and integrated fluency lessons such as FORI. Thirty-three studies, spanning 1979 to 1996, reported on unassisted repeated reading. Six studies, from 1987 to 1997, reported on classroom interventions including FORI that incorporated repeated reading within a larger instructional protocol. Fifteen of the repeated reading and three of the classroom intervention studies included control groups; the others used designs that measured growth from baseline for individuals or compared group outcomes for different instructional treatments.

Across the 33 repeated-reading studies, participants represented a range of grades and reading ability levels; 17 studies included primary grade children and 16 studies included upper-elementary grade children; a handful reported separately on first grade, middle school, high school, or college students. Participants in two-thirds of the primary-grade studies and

all of the upper-elementary studies were characterized as low achieving/performing or learning disabled. The 33 studies were analyzed for text-repetition criteria, passage difficulty, fluency measures, and, when available, comprehension measures; two studies also reported prosodic outcomes (Kuhn & Stahl, 2004).

According to Kuhn and Stahl's (2004) analysis, repeated-reading instruction worked well for many of the students, some of the time. Most of the 17 noncontrolled studies reported improved oral text-reading fluency over time, and some argued these effects were an acceleration of normal growth, particularly for students with reading disabilities. Six of the 15 controlled studies produced significantly greater achievement on the *majority* of outcomes than a control condition; five of these studied second or third graders, and one of them studied fifth graders. One study found improved oral text-reading fluency for familiar passages but not for transfer passages. When individual measures within these 15 studies were compared, 8 of the comparisons were statistically significant but 21 were not. However, the authors report that the type of control varied from students receiving no treatment to students spending equivalent time free reading, raising the possibility that effects from repeated reading may be due to increased time spent reading, and not the repetition of text. Kuhn and her colleagues (2006) began testing this question by comparing FORI based on repeated reading from the same texts with FORI based on "wide reading" from different but comparable texts. Both methods worked better on general reading outcomes than a control based on traditional basal instruction, but FORI based on wide reading produced earlier benefits.

Two of the repeated reading studies (Mathes & Fuchs, 1993; Rashotte & Torgensen, 1985) reviewed by Kuhn and Stahl (2004) used easy reading materials and failed to find



significant treatment effects, while 6 of 11 studies that used materials at or above the students' instructional level found differences favoring repeated reading. Generally, where an increase in reading rate and accuracy (WCPM) was found, there was also an increase in comprehension. Most comprehension outcomes measured micro-processing, such as the assignment of syntactic relations in cloze sentences; few measured macro-processing comprehension, as in demonstrating overall reading comprehension of a reading passage. Dowhower (1987) and Herman (1985) measured and found positive effects on prosodic measures, as well as reading rate, and the effects in Herman's study transferred to unfamiliar material.

Kuhn and Stahl (2004) also analyzed six studies that had examined the effects of basal-reading lessons that were redesigned to increase text reading fluency through repeated oral-reading practices, in conjunction with whole-class meaning-making activities. Three of these used controls, but only one, FORI (Stahl, Heubach, & Cramond, 1997) produced significantly better achievement as a result of fluency-oriented instruction. The authors (Kuhn, et al., 2006; Stahl & Heubach, 2005) continued to investigate variations of FORI in several year-long studies with second and fourth grade students. These studies showed significant outcomes for FORI students initially reading at primer level or above, on general reading measures that included school-wide standardized reading tests; many low-performing students caught up with their average-performing peers. Personal communication with M. R. Kuhn (March 20, 2008) and P. J. Schwanenflugal (March 28, 2008) confirmed that participants in these studies were all proficient English speakers, though a few had learned English as a second language.

O'Connor and colleagues (2007) compared outcomes on a variety of reading indicators for second and fourth graders who read poorly before reading treatment based on repeated reading, treatment based on "continuous reading" (more pages from the same texts), or participation in a control condition. Seven of 37 students spoke English as a second language but ranked Advanced/Proficient on state tests of language development; 16 students had identified learning disabilities. Students in repeated-reading and continuous-reading conditions showed greater growth on reading rate and comprehension than control students. No significant differences were found between students who practiced repeated reading or continuous reading, on any measure. The authors concluded that practice reading aloud with corrective feedback appears to be more important than the specific model of practice.

### **Performance Reading**

In multiple studies, repeated oral reading has improved text-reading fluency and reading comprehension of low-performing students (e.g., Hiebert, 2005a; Kuhn et al, 2006; Mercer, Campbell, Miller, Mercer, & Lane, 2000; O'Connor et al., 2007; Shany & Biemiller, 1995; Stahl & Heubach, 2005). Expressive oral-reading practice with the goal of performance, often in the form called Readers Theatre, may provide students with an authentic reason to read a text repeatedly (Rasinski, 2008). Students at fourth grade and beyond, including ELLs, may lose confidence and interest in reading as text demands increase (Chall, 1996; Cummins, 2003), even if they have acquired basic reading fluency. If they do not associate reading with success in school, positive self-concept, or personal pleasure, they may resist assigned reading or stop reading voluntarily, limiting opportunities for further growth. The 1994 NAEP report on reading fluency (Pinnell et al., 1995) not only

showed a robust relationship between voluntary reading and reading achievement in fourth graders but recommended that theoretically sound opportunities to read orally continue into the upper-elementary grades, years after they normally cease. Oral reading for performance has been reported in the practitioner literature to increase both younger and older students' motivation to read (Griffith & Rasinski, 2004; Rasinski, 2008; Rinehart, 1999; Worthy & Prater, 2002). Various practitioners have claimed that expressive oral-reading practices narrowed or closed gaps in reading achievement for primary and upper-elementary children (Corcoran & Davis, 2005; Griffith & Rasinski, 2004; Martinez, Roser, & Streker, 1999; Peebles, 2007; Worthy & Prater, 2002) but have offered little in the way of empirical evidence to support their claims. Kuhn and Stahl (2004) and the NRP (NICHD, 2000) did not include performance-based instruction in their reviews of repeated reading. Three reports are summarized below, to convey a qualitative flavor of the enthusiasm that accrues for many practitioners of classroom reading performance, students and teachers alike.

Corcoran and Davis (2005) assessed the effectiveness of a Readers-Theatre program with 12 learning-disabled students in a combined second/third grade classroom, through the use of attitude surveys, field notes, and running records of oral text-reading fluency. Ninety-seven percent of the students indicated the strongest positive level of excitement on the postsurvey when asked how Readers Theater made them feel about their reading. "An analysis of the fluency scores revealed an increase in the number of words correctly read per minute in fluency tests. If these students increased their number of words correctly by a quartile or more in an eight-week period, one can only imagine the gains of a year-long program" (Corcoran & Davis, 2005, p. 110).

Martinez et al. (1999) organized Readers Theatre repertory groups in two second-grade classes, one composed of Hispanic students of low socioeconomic status and the other ethnically and socioeconomically mixed. Nearly all students posted gains in their rate of reading over the 10-week study, with an average increase of 17 words per minute, while two similar classrooms who had the same books but no Readers Theatre, gained an average of 6.9 words per minute. Seventy-six percent of the students did not meet Hasbrouck and Tindal's (1992) oral reading rate standard at the outset; 75% approached or exceeded that standard by the end. Participants improved in accuracy, increased their reading levels on an informal reading inventory, some by two grade levels, and improved their prosodic ratings on a rubric, more than children in comparison classrooms. Little data and no inferential statistics were reported, and ELD status was not disclosed.

Griffith and Rasinski (2004) reported robust descriptive evidence for effective classroom fluency practices that included Readers Theatre. The 3-year, single room study (with three successive fourth grade classes) described a process, similar to a formative experiment, to discover which fluency-based instructional methods best helped under-achieving students improve their reading. Griffith began by emulating the study by Martinez et al. (1999) for 10 weeks. The results were so positive that she decided to continue Readers Theatre and kept data for the rest of the year. The four Title I students she targeted experienced a 2.5-year increase in silent reading comprehension and "the children's average gain in word-list recognition was 1.25 years, substantively more than in previous years" (p. 130). During Year 2, Griffith discovered early that 44% of her students read below the normal reading rate, so she added 1-minute timed reads, from exemplary children's trade books, and selective partner reading. Title-I target students experienced substantial gains

in oral text-reading fluency on an informal inventory administered by other site staff. Their average gain was 2.4 years in word recognition and 3.2 years in silent reading comprehension, while growth in reading rate nearly doubled what is normally expected. “The focus on fluency was moving my class toward a reading-centered culture . . . [and] parents were also recognizing the impact of this heightened emphasis” (p. 132). This remark suggests the potential for word-recognition instruction to enhance reading within a socio-psycholinguistic paradigm. In Year 3, Griffith made additional refinements to her three efforts (Readers Theater, partner reading, and timed reads) and students once again posted dramatic gains by year’s end. She used Title I data to showcase startling improvements in average instructional reading level changes and percentage of at-risk students exiting at fifth-grade reading level or above for her fluency-enhanced program (2000-2003) over her traditional reading program (1997-2000). Griffith refers to “one of my English learners” in her narrative, but never quantifies the number of children with ELL status. Griffith’s simple descriptive statistics suggest the potential for a solitary teacher’s inclusion of fluency practices into an existing curriculum.

### **Repeated Reading With English Language Learners**

With the exception of three dissertations (Boisvert, 2006; Denton, 2000; Kemp, 2006), there does not appear to be any peer-reviewed research, experimental or otherwise, on the use of repeated reading with ELLs (M. Kuhn, personal communication, March 20, 2008; Lesaux & Geva, 2008; Lesaux & Siegel, 2002; T. Rasinski, personal communication, January 11, 2008; P. Schwanenflugel, personal communication, March 28, 2008), and,

apparently, a single dissertation (Denton, 2000) has reported outcomes for ELLs in upper elementary grades.

Kemp (2006) compared the reading outcomes for an oral repeated-reading program (Read Naturally®), utilizing added feedback, to a scaffolded version of silent-sustained reading, for 168 third graders, including 42 ELLs, randomly assigned to one or the other condition. Both methods produced significant growth for reading sub-skills and showed comparable growth for ELLs and native-English speakers. Boisvert (2006) studied three adolescent ELLs. She showed that a video protocol for self-modeling of oral text-reading fluency and assisted repeated-reading practice produced gains in oral-reading rate and accuracy on increasingly difficult texts; for two of the students, gains in oral-reading rate and accuracy generalized to unrehearsed passages. Denton (2000) studied two reading-tutoring interventions for 45 ELLs in grades 2 through 5, comparing them with 39 matched but untutored students. One program (Read Well®) consisted of explicit, systematic instruction in phonics and word reading, with practice reading decodable texts. The other used repeated reading (Read Naturally®) with audiotapes, along with vocabulary and comprehension instruction. Students were placed in one or the other tutoring condition depending on their pretest scores. Students in the first condition made significantly more progress in word reading than untutored classmates and their “growth in word attack and oral reading accuracy appeared to be supported by the tutoring” (Denton, 2000, p. iii). Students in the second condition made more rapid gains in oral reading rate and accuracy than matched children in the untutored condition but the results were “weaker than expected” (Denton, 2000, p. iv). Students in both tutoring conditions outperformed untutored students in reading

comprehension, but the results were not statistically significant. Average tutoring time was 14.6 hours over 10 weeks.

Finally, Reading Recovery, a first grade one-on-one intervention, has a fluency component and has proven successful with ELLs (Ashdown & Simic, 2000; Neal & Kelly, 1999). A study by Flood, Lapp, and Fisher (2005) demonstrated success with Neurological Impress Method (Heckelman, 1969), a one-on-one form of assisted reading, for at-risk children in Grades 3 to 6, including an unspecified number of ELLs for whom disaggregated data were not reported.

### **THE ROLE OF TEXTS IN READING FLUENCY**

How difficult should the texts of reading instruction be for beginning and struggling readers, of whom many are ELLs? Since 1983, Elfreida Hiebert has investigated the relationship of text type to the success of reading instruction for beginning and struggling readers, including ELLs. According to Hiebert (2002b), some scholars, such as Stahl (2000), believe that students should be taught with, and practice on, texts that are more difficult than those with which they are assessed. Others, such as Fisher et al. (1978), claim that students are more successful when they have frequent occasions to read texts on which they do not make substantial numbers of errors. Hiebert has discovered that word-level features of texts are important variables in the success of repeated-reading and assisted-reading approaches and that carefully chosen texts act as a scaffold for repeated reading instruction (Hiebert & Fisher, 2005). The body of Hiebert's research is reviewed below.

## **Textbook Design**

Hiebert and her colleagues (2004) believe that the types of literature-based and decodable texts currently used to teach beginning readers may slow reading development, in many cases, particularly for ELLs; an exclusive diet of these texts may not provide students with the opportunity to become fluent with those words that account for large portions of written language. In their work, the authors discussed the features of texts that support first-grade ELLs. Since 2000, they argued, the immigrant-destination states of California and Texas shifted from use of literature-based texts to use of decodable texts, thereby ignoring an array of important features that are critical to the success of beginning readers, such as word repetition rates and the rate at which new words are introduced. In response, Hiebert and her colleagues presented a framework for text features that could guide the design of textbooks for first-grade ELLs, features captured in texts they had designed for the Network for English Acquisition and Reading Star (NEARStar®) supplementary reading program. They compared NEARStar® texts with various current and historical anthologies and “little books” series, such as Open Court®, for the number of unique words per 100, the average number of words per passage, and five measurable characteristics of the unique words. Citing their previous studies of first graders (Hiebert & Fisher, 2002; Hiebert, Liu, Levin, Huxley, & Chung, 1995), they concluded that NEARStar® texts were more supportive of the actual word-learning rates of beginning first graders which, in one study, included ELLs. They also reported that the rate of introducing new words in basal anthologies had increased dramatically over the past decades, undermining the success of many young readers (Hiebert et al., 2004).



NEARStar® texts are based on Hiebert's Text Elements by Task (TExT) model (Hiebert, 2002b), a system for analyzing the *linguistic content* and *cognitive load* of texts. *Linguistic content* refers to the types of words, *cognitive load* to the number of different (unique) words, and number of repetitions per unique word. Critical linguistic knowledge of beginning readers is reflected in high-interest words that are easy to image and remember, phonetically regular words, and words that occur frequently but may be phonetically irregular. According to automaticity theory (LaBerge & Samuels, 1974), much of the cognitive processing of beginning readers is directed at pronunciation of unknown words. For ELLs, there is the additional cognitive demand of pronouncing words in a new language and connecting the English label with the label in their native language. Therefore, written words that represent familiar concepts are essential to reading development (Hiebert et al., 2004).

According to Hiebert and her colleagues (2004), research has little to say about the number of high-imagery words children can attend to, how many exemplars of words that share common and consistent within-word patterns are needed for recognition of new words with those patterns, and how often children need to see irregular, high-frequency words for them to be instantly recognized. The authors described the writing of engaging and theoretically sound texts for beginning reading as “a delicate balancing act” (p. 45), with complex trade-offs. To bring ELLs to the level at which they can participate in typical reading programs, they developed three levels of curriculum for NEARStar®. Students are introduced to high-frequency words at the rate of one per text and these words are repeated sufficiently, so that by the end of the program students have been exposed to a core vocabulary that accounts for a substantial percentage of words they will read in typical,

primary-level texts. It is important to note that NEARStar® is a supplementary curriculum, not a replacement for classroom literacy instruction, which might take a socio-psycholinguistic approach.

### **Measuring Text Difficulty**

Another of Hiebert's 2002b studies examined past and current definitions of text difficulty and how they were expressed in current standards, texts, and assessments for Grade 3. Prior to the rise of the socio-psycholinguistic view of reading in the late 1980s, the level of a text's difficulty was estimated using one of several formulas based on syntactic and semantic complexity, represented by the number of words per sentence and the familiarity of words compared to those on an anchor list. These estimates were attempts to standardize text levels, separate from the notion of the *support* level (Betts, 1946) required for a particular child to read a particular text. During the 1980s, readability formulas were used to contrive texts that were then criticized as being detrimental to comprehension. Consequently, during the late 1980s and 1990s, there was a movement toward use of authentic literature in school texts and classrooms, corresponding to the rise of the socio-psycholinguistic view of reading acquisition. By the end of the last decade, the pendulum began to swing back toward use of some contrived texts to support beginning readers. In particular, six states, including the immigrant-destination states of California and Texas, called for their beginning textbooks to have high percentages of easily decodable words, redirecting attention to the older readability formulas as well as a recent manifestation called Lexiles (Hiebert, 2002b).

Over the decade prior to Hiebert's review (2002b), reading scholars explored alternate ways of establishing a text's difficulty based on the text's engagingness, predictability, and

decodability (Hoffman et al., 1994), potential for accuracy based on the guidance provided in accompanying teacher manuals (Stein, Johnson, & Gutlohn, 1999), quantitative analysis of word-level text demands (Hiebert, 1999, 2000a, 2000b), and text leveling based on a matrix of qualitative features (Fountas & Pinnell, 1999, 2001). In the same work, Hiebert (2002b) analyzed national panel reviews and state standards documents for requirements or descriptions of difficulty for Grade 3 texts. She concluded from these reviews that only the Fry readability formula, Lexiles, and her TExT model are measurable enough to make it possible to compare features of state textbooks from one grade to the next. Her analysis of state textbooks against these three systems concluded that, in general, the California, Florida, and Texas texts proposed for Grade 3 do not progress in difficulty and require their readers be adept at reading multisyllabic words that are not frequent, in texts approaching what has typically been regarded as frustration level, 10% or more of words unfamiliar to the reader (Betts, 1946; Rasinski, 1999). By contrast with the texts, the reading difficulty levels of various Grade 3 state assessments, with one exception, were found to be consistent and within Grade 3 bands on these three measures.

### **Reading Fluency Curriculum**

Based on her TExT model of linguistic content and cognitive load (Hiebert, 2002b), Hiebert (2003a) developed a set of short science and social studies texts published as QuickReads®, to support the reading fluency development of elementary-school students. The texts follow a graded “fluency curriculum” based on six word-frequency zones (Hiebert, 2005a, p. 186) superimposed on the frequencies of 154,941 words that appeared in a sample of 17.25 million words in English textbooks from Kindergarten through college (Zeno et al.,

1995). A total of 5,538 words represented 80% of the 17.25 million words; a mere 930 words represented 67% of the sample. When simple derivatives of these 930 were included, a significant portion of the next 1,676 words were also accounted for (Hiebert, 2005a). The levels of Hiebert's second- through sixth-grade curriculum reflect (a) an increasing proportion of these high-frequency words, from the 300 most-frequently-used words at Grade 2 to the 5,000 most-frequently used at Grade 6; (b) a theoretically derived progression of within-word phonics patterns, single-syllable at Grades 2 and 3, multisyllabic at Grades 4 through 6; and (c) increasing word-reading rates, from 80 words per minute at Grade 2 to 150 words per minute at Grade 6 (see Appendix A).

Hiebert (2008b) reviewed the lines of research that support her hypothesis that high percentages of rare words will be less useful for beginning and struggling readers. Rashotte and Torgeson (1985) and Faulkner and Levy (1994) found that texts with the highest percentage of shared words produced the greatest gains in reading speed and accuracy, which may explain much of the power of assisted and repeated reading successes. The other group of studies was used in the National Reading Panel's (NRP; NICHD, 2000) meta-analysis of oral reading practices, which included repeated and other forms of oral reading. Hiebert and Fisher (2002) categorized the texts used in these studies as high-interest/low-vocabulary (HI/LV), skill-builders, pre-1990 basal texts controlled by readability formulas, or post-1990 basal texts utilizing trade literature. Only three of the NRP studies used recent literature-based texts, and only one of these reported on reading fluency rates, finding no differences between a shared-book-with-repeated-reading group and a round-robin group. Hiebert and Fisher (2002) analyzed the other three categories of texts for percentages of unique words within and beyond the 5,000 most frequently appearing words in English. They concluded

that positive outcomes were achieved with texts that had a substantially lower percentage of rare, multisyllabic, single-appearing words than is the case for current literature-based anthologies.

### **Texts for Repeated and Assisted Reading**

Hiebert subsequently used her controlled-vocabulary content texts in studies of FORI based on repeated reading. The first study (Hiebert, 2003b) compared gains in reading accuracy and rate for second graders, those reading content texts controlled for 2% rare and multisyllabic words with those using literature-based texts containing 20% rare and multisyllabic words. The adjusted means of the two groups approached significance, so Hiebert (2005a) replicated the experiment for a longer period and included prosody and comprehension scores. On prosody and comprehension, no significant differences were found between the two intervention groups (FORI) and a control (traditional basal instruction) after 20 weeks. The content-text group significantly outperformed the control for gains in reading rate and accuracy, but comparison of the content-text group with the literature group was not significant for this marker. When these results were disaggregated by initial reading level, it was found that rate and accuracy growth in the highest quartile was comparable for all conditions, and that students in the second-highest quartile actually made lower gains when in the content-text group than in literature or control groups. However, gains for students in the lowest two quartiles were considerably higher when the children used the controlled-vocabulary content texts, compared to the literature or control conditions. Hiebert (2005a) concluded that the features of texts made a difference for the lower-achieving second-grade students, over and above the application of the repeated-reading

procedures. Hiebert also analyzed opportunity (time) to read for the different classrooms and discovered that while literature-based classrooms spent 60% more time on daily reading instruction than content-text classrooms, their gains were not commensurately higher.

One recent doctoral dissertation (Huxley, 2006) compared the effects of third-grade, literature-based FORI instruction with an intervention condition that substituted 45 minutes of FORI activities a week with assisted reading from QuickReads® texts, thereby controlling for opportunity to read between the two groups. After 12 weeks, intervention students had significantly higher posttest scores than “wide reading” FORI control students on reading rate and accuracy and a measure of content knowledge related to the readings; they made greater gains in comprehension as well, though the result was not inferentially significant. Huxley found that higher skilled readers outperformed lower skilled students on reading rate and accuracy, but the lower-skilled students gained at the same rate and did not lose ground. Huxley described the participants as 63% African American and 35% Caucasian, which suggests that ELLs were not represented.

### **Silent Reading Fluency**

Hiebert and Martin (2004) believe that successful reading-fluency interventions need to provide opportunities for students to transfer their skills to silent reading, a process used with QuickReads® (2003) texts that Hiebert termed *scaffolded silent reading*. Several studies (Manning & Manning, 1984; Samuels, 2005) support giving students a purpose for reading a text and a definite time period in which to accomplish it, as a scaffold for silent reading (Hiebert, 2006). The NRP (NICHD, 2000) did not review any research on repeated silent reading or even single silent readings of multiple texts. Subsequently, three studies

reported by Hiebert (2008a) examined the effects of scaffolded silent reading. Reutzel (2005) compared scaffolded silent reading with repeated oral reading and found no significant differences on third graders' reading fluency and comprehension except for one passage, for which scaffolded silent reading was favored. Wu and Samuels (2004) demonstrated significantly greater gains in word recognition and vocabulary for poor readers over good readers as a result of scaffolded silent reading. In two FORI replications, Kuhn and colleagues (2006) compared effects of repeatedly reading a single text orally over a week with orally and silently reading several texts over a week (wide reading). At mid-year, the "wide reading" group had significantly greater reading rate and accuracy than the control, while the oral repeated reading group did not.

Hiebert (2008b) also evaluated the Gray Oral Reading Test (GORT), the instrument selected for the proposed study, and found it in alignment with her word-frequency curriculum.

## **SUMMARY**

The literature reviewed above supports the effort to find out more about how ELLs respond to fluency-oriented reading instruction and how it can be modified to achieve overall reading improvement. The demographic review demonstrates the need for improved literacy instruction for ELLs. Theories of first and second language acquisition and stages of reading acquisition offer frameworks from which effective instruction can be developed. A limited database on the development of reading in second language learners suggests that it is quite similar to learning to read in the first language. Definitions of reading fluency and related terms, along with theories of automatic reading processes, clarify how repeated reading, as an

instructional practice, may contribute to growth in reading fluency, inclusive of reading comprehension. Research on fluency-based instruction suggests that it will have positive outcomes for many ELLs as it has for many native English speakers. Finally, studies on the role of texts suggest that particular types of controlled-vocabulary texts may be more suited to fluency-based reading instruction than the textbooks of many classrooms.



## **CHAPTER 3**

### **METHODOLOGY**

This research study addresses the question of how repeated reading, a general instructional method that has been demonstrated to improve reading achievement for many underperforming native English-speaking children, may be used to advance the reading achievement of English language learners (ELLs), in a relatively short period of time. Repeated reading procedures have shown impressive results for many English-proficient students in primary grades who read above the preprimer level (i.e., have the ability to decode single-syllable words commonly found in beginning reading texts) but not yet at their grade level. Repeated reading has also shown results for older students in remedial settings.

The chapter has been organized to reflect the six chronological phases of a formative experiment within the traditional format of Setting, Participants, Instruments, Data Collection, and Data Analysis. A discussion of the overall research design is presented first, detailing the phases of a formative experiment. This includes decisions about the study setting as well as prescreening assumptions made about the participants relative to the pedagogical goal, a key feature of the design. The second section details participant selection and consent procedures. The third section elaborates data collection and intervention procedures, corresponding to the phases of the experiment: thick description of the environment, baseline assessments, intervention, formative data, and post assessments. The final section discusses how data were analyzed and reported.

## RESEARCH DESIGN

The research question reflects the focus on a fixed and measurable pedagogical goal, with instructional and environmental features allowed to vary. The methodology for the proposed study is the formative, or design, experiment as described by Reinking and Bradley (2008) and others (Cobb, Confrey, diSessa, Lehrer, & Schaule, 2002; Reigeluth & Frick, 1999). A formative experiment is a mixed-method study that embraces a pragmatic, ecological approach to teaching and learning, and is appropriate for exploratory research, situations where learning domains and their relationship to outcomes are not well defined by previous research. The virtual lack of research on reading fluency instruction for ELLs justified its use at this time.

A key feature of a formative experiment is the determination of a fixed pedagogical goal. After a theoretically based course of instruction is decided, it is allowed to vary, based on formative data, to meet the goal. Several formative experiments have been used to produce positive academic outcomes for ELLs or for reading fluency (Griffith & Rasinski, 2004; Ivey & Broaddus, 2007; Jimenez, Garcia, & Pearson, 1996; Oakley, 2003). The sensitivity of a formative experiment to ecological factors in the immediate educational environment reflects an understanding that ELLs are diverse, and their needs are best addressed locally (Antunez, 2002; Peregoy & Boyle, 2000).

Reinking and Bradley (2008) identify six organizing questions for conceiving and developing a formative experiment:

1. What is the pedagogical goal and relevant theory pertaining to that goal?
2. What intervention has the potential to achieve the goal?
3. What factors enhance or inhibit the intervention?
4. How can the intervention be modified to achieve the goal?

5. What are the unanticipated effects or outcomes?
6. How has the instructional environment changed as a result?

They further identify six phases of research:

- *Phase One:* The researcher/research team determines a pedagogical goal based on theory, meets with stakeholders, recruits participants, and plans an intervention to meet the pedagogical goal.
- *Phase Two:* The researcher/research team use qualitative methods, such as observations and interviews of stakeholders, to create a thick description of the instructional environment.
- *Phase Three:* Baseline data are collected that will be used to determine learning outcomes related to the pedagogical goal.
- *Phase Four:* The intervention is implemented. Formative data are used to modify the intervention in the direction of the pedagogical goal.
- *Phase Five:* Postassessments are compared to baseline assessments to determine the degree of learning success.
- *Phase Six:* The researcher(s) consolidate and report all findings, qualitative and quantitative, from start to finish, including answering the ecological question of how the instructional environment has changed.

Each of these phases is described in more detail below.

### **Phase One: Pedagogical Goal**

In this study, the primary goal was improved oral text-reading fluency, inclusive of reading comprehension, for 17 upper-elementary ELLs currently reading below grade level. Motivation to read and perform was expected to influence the direction and outcomes of the study but was not the focus of research.

### **Phase One: Theory/Framework**

The theoretical frameworks that informed this experiment are fourfold and were elaborated in Chapter 2:

1. Stage theories of reading development (Chall, 1996; Ehri, 1991; Samuels, 2002) including what is known about development of reading in a second language (Lesaux & Geva, 2008).
2. Cognitive theories that explain automatic processes of reading (LaBerge & Samuels, 1974; Logan, 1997; Perfetti, 1985; Stanovich, 1980) that contribute to fluent reading.
3. Theories of first language acquisition (Pearson & Stephens, 1994), and second language acquisition (Cummins, 1979; Krashen, 1982b, 2003a).
4. A model of the measurable demands of texts and their influence on reading fluency (Hiebert & Fisher, 2005; Hiebert et al., 2004).

### **Setting**

The study took place from January 29 to April 3, 2009, within a single classroom at Carver Elementary School in the San Diego Unified School District, during a preexisting, daily, 30-minute block of English language development (ELD) instruction. Carver Elementary is a small, urban K-8 school, set apart from neighborhood residences, bordering natural parkland. Enrollment on January 6, 2009 was 313 students in 20 classrooms including 20 preschool children in two classrooms for students with special needs. Most students live in the surrounding neighborhood. Thirty-five were enrolled in self-contained K-8 special education classrooms at the time of the study, and approximately 50 attended through the Open Enrollment Program, in which parents may select the school and provide their own transportation. Most of these students choose to attend Carver to learn Arabic during an after-school program.

Students' backgrounds include diverse Hispanic, Asian, and African cultures. Seventy-five percent of students speak a language other than English. Fifty percent are classified as ELLs, according to the annual CELDT evaluation for the state of California. Of

these, 55% speak Spanish, 23% Somali, 12% Vietnamese, 4% Cambodian, and 6% other languages. English language learners are enrolled in a sheltered English program to help them meet English language development standards. In Grades 3, 4, and 5, students recombine by English proficiency level every day for one-half hour of intensive ELD instruction, then return to their regular classrooms in which they are combined with ELLs of different levels and with native English speakers. The classroom instruction in English is supplemented for Newcomers and Beginning level ELLs by small-group instruction provided by an on-site English language support teacher and her aide.

Carver Elementary is rated an “underperforming” school within the state of California’s accountability system and was eligible for state intervention beginning in the 2009-1010 school year. At the time of the study, the school was on a list for possible closure due to its low enrollment, which was less than half of capacity.

The ELD classroom setting was determined by the teaching staff and principal to be the most appropriate one for the study and least disruptive to the children’s existing instructional day. Most of the participants enrolled in the Intermediate ELD level class for Grades 3 through 5 were eligible for the study and could participate in the instruction regardless of whether they agreed to be in the study and have data collected for them. Eight students in Early Intermediate level classes and/or in Grade 6 who met the selection criteria and agreed to be in the study were moved to the Intermediate classroom for the duration of the study. This move was agreed upon in principle by all the teachers whom it affected and by the principal.

## **Assumptions About Participants**

The design of the intervention reflected several assumptions about the targeted learners, which were verified when the children were actually screened.

1. Basic reading fluency (Pikulski & Chard, 2005) was observed. This is interpreted as an ability to read single-syllable words accurately, but not necessarily at grade-level benchmark rates (Hasbrouck & Tindal, 2006). The intervention, while it reinforced primary-grade level word patterns in Component One, focused more on later fluency (Pikulski & Chard, 2005), when syntactic skills and their reciprocity with text-level comprehension come increasingly into play. Later fluency was addressed most in Component Two of the intervention. Students who were still struggling with basic single-syllable-word decoding were not candidates for this study. A few students, primarily those in Grade 3, exhibited challenges with some, but not most, within-word vowel patterns and were allowed to participate in the study.
2. Cognitive skills shown to underlie rapid word recognition, such as rapid naming of letters and working memory speed, were normal. Five students with Individual Education Plans (IEPs) for learning disability were included in the study, but those with severe processing deficits, especially double deficits (i.e., visual and auditory), were not candidates.
3. Upper-elementary ELLs of Intermediate proficiency who were performing below grade level in reading were normally developing but lacked adequate practice reading the most frequent words and within-word spelling patterns in English and had either become discouraged by reading, which they avoided, or were regularly mismatched to texts above their instructional levels, with which they continued to struggle. Possible exceptions to this would have been students who had recently immigrated to the United States with high levels of literacy in their native language but none of the students in the study met this profile.

The intervention was designed to give the participating ELLs:

1. Models of fluent text reading at rates proportional to their actual reading growth.
2. Substantial practice at their instructional level in connected-text reading of the most frequently appearing words in English, along with a few rare content-related words that are repeated often enough to be learned from one short text.
3. Demands that they demonstrate learning of vocabulary and content ideas.
4. Substantial practice with expressive reading of text that reflects understanding of syntactical structures and text-level comprehension.

5. Direct instruction and modeling of prosodic oral text reading, according to their need.
6. Practice using and negotiating academic language in a social learning environment.
7. Opportunity to participate in meta-cognitive evaluation of their own reading performance.

## **PARTICIPANTS**

Selection of participants and obtaining participant consent occurred during Phase One of the formative experiment.

### **Phase One: Selection of Participants**

A pool of 20 potential student participants was identified from ELLs in Grades 3, 4, 5, and 6 (ages 9 -12) who had demonstrated below grade-level expectation for reading achievement on multiple assessments:

- Overall Proficiency Level (OPL) of Intermediate or Early Advanced on the 2008 California English Language Development Test (CELDT), hand-scored on site by the English Learner Support Teacher.
- Reading portion of the 2008 CELDT in the Early Intermediate to Intermediate range, hand-scored on site by the English Learner Support Teacher.
- Score in the Basic (bottom half), Below Basic, or Far Below Basic performance band on the English Language Arts portion of the June 2008 California Standards Test.
- One full level or more below grade level on the district-mandated Gates-MacGinitie assessment of reading comprehension administered in September 2008.
- Able to recognize/decode single-syllable words in English but at rates below expected norms for their grade level and/or with limited comprehension of the text, according to the judgment of their classroom teacher.

- Identified by their classroom teachers as having low interest in reading and/or lacking smooth, prosodic oral text reading fluency.

Screening assessments were those normally given to all ELLs in the district enrolled in Grades 3 through 6. Students with Individual Education Plans (IEPs) were considered if their learning disabilities were not severe (i.e., double processing deficits) and the school's Special Education Resource Specialist believed they would benefit from the intervention. Participants of all genders and ethnicities were considered, and selection was not based in any way on either category.

The selection criteria were purposefully narrow to locate ELLs most likely to benefit from repeated reading instruction. As this was not a traditional experiment, but an exploratory formative experiment, in which instructional conditions were purposefully varied to meet a fixed pedagogical goal, such selection criteria were justified.

The 20 candidates were invited, through their parents, to participate in the intervention. Eighteen families agreed. Six students were in Grade 6, two in Grade 5, four in Grade 4, and six in Grade 3. There were 8 girls and 10 boys initially, but one fourth-grade boy left the school midway through the intervention. Somali was the home language for 6 of the students, Spanish for 11, and Vietnamese for 1, the student who dropped midway. One student's parents speak both Spanish and English at home, and he was assessed "non-proficient" in Spanish but was included anyway.

Two of the participating students were born outside the United States, one in Mexico and one in Kenya. Two of the students were born in the United States outside of California, one in Missouri and one in Minnesota. The other 13 students were born in California, most in San Diego County. Eight of the students entered Kindergarten at Carver, and six of these



had been enrolled continuously at the school. Six students began Kindergarten at another school in California and one in Missouri. The Minnesota-born student had entered Carver the previous year as a second grader, with no previous documentation of schooling. One student came from Africa to Utah in 2007, and there was no documentation of his having attended school in Africa; his degree of literacy in his home language, Somali, is unknown.

One of the baseline assessments, the Gray Oral Reading Test-4, was used to corroborate a teacher's judgment that a student was able to recognize/decode single-syllable words in English but was reading at a rate below the expected norm for her grade level and/or with limited comprehension. Oral reading rates, normed by grade level and published by Hasbrouck and Tindal (2006), served as the benchmark.

A fourth grade teacher who had worked at the school for 8 years volunteered to assist the researcher with the instructional intervention, serve as a check on pedagogical decisions and the final narrative, and act as a second oral-fluency rater. He is the Visual and Performing Arts coordinator for the school, and has a keen interest in both theater and oral reading performance, one of the two components of the intervention.

The researcher had taught for 21 years in the study school district and was in her fifth year as a Literacy Resource Teacher at the study site.

### **Phase One: Participant Consent**

The researcher, with cooperation of the classroom teachers, sent letters to parents of the candidates that explained the purpose and procedures of the intervention, including potential benefits and risks and its strictly voluntary nature, and invited them to participate. Consent forms for parents were made available in the home languages of the parents. The

parent consent form did not contain abstruse or academic language and was written at a seventh-grade reading level (see Appendix B).

## **DATA COLLECTION AND INTERVENTION**

Data collection and intervention occurred during Phases Two through Five of the formative experiment. During Phase Two, a thick description of the study environment was made. Baseline assessments were done during Phase Three. The instructional intervention, with formative assessments, was implemented during Phase Four. Post assessments were done during Phase Five.

### **Phase Two: Thick Description of Environment**

The researcher used school documents and informal field observations, together with her 5 years' experience at the school, to write a rich description of the school and its academic programs (Appendix C). Once the intervention began, continuing description was drawn from entries in the researcher's reflective journal. Five members of the school's Instructional Learning Team, four teachers and the principal, read the description and provided feedback, acting as "member checks." Their contributions were included in the final description. Thick description of instruction and setting provides detail for individual teachers or school-based teams to replicate or create innovations on the intervention at a later time.

### **Phase Three: Baseline Assessments**

The researcher collected evidence of each student's reading achievement in three ways.

## **GRAY ORAL READING TEST (GORT-4)**

This individually administered test (see Appendix D) provides five norm-referenced measures for connected-text reading: Rate, Accuracy, Fluency (a combination score), Comprehension, and Overall Reading Ability (a combination score). Form A was administered by the researcher in January 2009, during the 2 weeks prior to the intervention. Form B was administered by the researcher in April 2009 during the ninth week of the intervention, and served as a posttest. The GORT-4 also provides a system for analyzing miscues, which served as corroboration of the assumption of “basic” fluency, the ability to decode primary-grade level, single-syllable words. The GORT-4 is a standardized, norm-referenced instrument often used for research on the reading abilities of school-age children. Percentiles are normed by age, in years and months. It was last normed with 1,677 students in 28 states between Fall 1999 and Fall 2000, at which time demographics such as gender, race, rural or urban, ethnicity, family income, parent education, and disability conformed to national expectations at each age covered. The two Forms, A and B, are internally consistent. The overall reliability coefficients for three sources of test error range from 0.85 to 0.99, with most above 0.95. Procedures for establishing and reporting validity are also provided and well within acceptable ranges (Wiederholt & Bryant, 2001). Hiebert (2008b) determined the GORT-4 to be consistent with her graded fluency curriculum, on which the intervention texts for this study are based.

## **MULTIDIMENSIONAL FLUENCY RUBRIC**

Each student’s oral text-reading during the GORT-4 was digitally audio recorded and analyzed by two raters, the researcher and the assisting teacher, on this 4-point rubric

(Appendix E), which characterizes four dimensions of prosodic reading: Expression and Volume, Phrasing, Smoothness, and Pace. Before scoring, the two raters participated in a practice session to calibrate their use of the rubric, then scored the readings independently of one another over several weeks. Where significant discrepancies existed in the baseline judgments, the two raters listened to the recordings together and reached consensus.

### **CURRICULUM BASED MEASUREMENT (CBM) OF ORAL READING**

This assessment required the student to read aloud from an unpracticed text for 1 minute. The readings were drawn from the Component One curriculum books, QuickReads® (Hiebert, 2003a). The reading was recorded and analyzed for word-reading rate and accuracy. Progress was tabled by week. The initial plan was to chart the results graphically, in addition (see Appendix F), but the tabled results did not reflect the anticipated inclines. Two probes of each student reading unpracticed nonfiction text for 1 minute served as a baseline for formative data collection. These were made during Week One of the intervention. Initially, readings were drawn from the QuickReads® Book 3 at the child's instructional level, while Book 1 and Book 2 were reserved for instruction. Text placement was made during December 2008, based on materials provided by the QuickReads® publisher for that purpose. The researcher decided to use a later book in the same instructional series, but at the same instructional level, as this would best reflect the instructional curriculum and, assuming a gradual progression in word knowledge over the three books, minimize "ceiling" effects.

Target rates for CBM reading intervention are often taken to be the average for the class as a whole. In this study, target rates were not established prior to the intervention.

Marston (1989) reports extensively on reliability and validity studies for CBM oral reading and concludes that CBM oral reading serves as a valid proxy for reading comprehension. Baker and Good (1995) found CBM in English reading to be as reliable for their Grade 2 bilingual students as for their monolingual classmates; it is unknown if this relationship holds for older students.

### **Phase Four: Intervention**

This section reflects the initial thinking and planning for the intervention and the modifications that were anticipated at that time. Subsequent modifications, based on formative data, are narrated in Chapter 4, and summarized in Table 1.

During their daily 30-minute English language development block, student participants read short content-area texts at their instructional level, repeatedly. Instructional-level texts are those that offer a few reading challenges but not enough to frustrate the student or obstruct the student's comprehension of the text. Repeated reading was initially divided into two 15-minute components. This was expected to maximize the potential for meeting the pedagogical goal by addressing different dimensions of fluency and providing instructional variety to keep the students engaged. Repeated reading instruction took place 4 or 5 days a week, in 30-minute sessions, over 9 weeks, from January 29 to April 3, 2009 between two 4-week breaks when students and teachers were not at school.

The first day of the intervention was devoted to setting expectations and to discussion and demonstration of oral text-reading fluency, which was simply referred to as "fluency" with the children. After considering various inductive or deductive approaches, the

**Table 1. Outline of Instruction by Component, Showing Key Changes Made on the Basis of Observations**

Week	Quick Reads® (QR)	Performance Practice	Performances	Monitoring
0	(1) • Introduce <i>fluency</i> and QR protocol (3 reads)			• Complete GORT-4 pretesting
1	(3) • Teach QR routine in stages • Student monitor records Read 2 consensus on 3x5 card for each group			• Record baseline CBM data • Brief coaching for some students
2	(3) • Preview challenging words (5 min.) • Facilitate QR routine with 15-min. goal • Vocalize PAUSE for Read 2 (teacher only) • Visual feedback for QR comprehension questions • Suspend student charting of Read 3	(1) • Introduce reading performance and scripts		• CBM readings • Emphasize pre-reading of text features • Re-evaluate QR® instructional levels
3	(4) • Re-assign instructional levels • Alternate days for Reads 1, 2 and Read 3 (10 min/day) • Begin mini-lessons	(4) • Facilitate script practice (10 min/day)	(1) • Groups perform last day of week (from now on) • Specific praise for clarity, volume, pace, pausing, or emphasis • One or two specific goals for improvement	• Skip CBM to reinforce QR® protocol in small groups

(table continues)

**Table 1. (continued)**

Week	Quick Reads® (QR)	Performance Practice	Performances	Monitoring
4	(4) <ul style="list-style-type: none"> <li>• Begin alternating days with performance practice (2 lessons/week)</li> <li>• Replace cards with displayed adhesive notes for Read 2 summaries</li> <li>• Encourage look-backs for comprehension</li> <li>• Incentive chart to track comprehension</li> <li>• Written feedback for partial comprehension</li> </ul>	(2) <ul style="list-style-type: none"> <li>• New scripts</li> <li>• Begin alternating days with QR routine (2 days/week)</li> <li>• Exercises for volume and pausing with punctuation</li> </ul>	(1) <ul style="list-style-type: none"> <li>• Informal rating (1-5) for group on pausing, emphasis, and volume</li> </ul>	<ul style="list-style-type: none"> <li>• Resume CBM readings</li> <li>• Continue reminding students to preread text features</li> </ul>
5		(2) <ul style="list-style-type: none"> <li>• New scripts, length doubled</li> <li>• Facilitate word emphases (teacher underlined) during practice</li> </ul>	(1) <ul style="list-style-type: none"> <li>• Introduce comprehension point challenge for audience</li> <li>• Continue informal ratings</li> <li>• Model gesturing implicitly while substituting for absent students</li> </ul>	<ul style="list-style-type: none"> <li>• CBM readings</li> <li>• Start informal checking of comprehension</li> </ul>
6	(2) <ul style="list-style-type: none"> <li>• Set class goal for comprehension chart</li> <li>• “Magic headphones” for Read 3</li> </ul>	(2)		

(table continues)

**Table 1. (continued)**

Week	Quick Reads® (QR)	Performance Practice	Performances	Monitoring
6	(2) <ul style="list-style-type: none"> <li>• Set class goal for comprehension chart</li> <li>• “Magic headphones” for Read 3</li> </ul>	(2) <ul style="list-style-type: none"> <li>• Return to shorter scripts</li> <li>• Stop selecting words to emphasize vocally and teach students to do it</li> <li>• Additional exercises for pausing and word emphasis</li> <li>• Introduce gestures, with class exercises, coach during practice</li> </ul>	(1) <ul style="list-style-type: none"> <li>• Monitor audience comprehension toward point goal (to supplant ratings)</li> </ul>	<ul style="list-style-type: none"> <li>• CBM readings</li> <li>• Continue prereading, postreading checks</li> <li>• Start coaching some students on word-attack strategies</li> </ul>
7	(2) <ul style="list-style-type: none"> <li>• Actively coach answering of comprehension questions after Read 3</li> </ul>	(2) <ul style="list-style-type: none"> <li>• New scripts</li> <li>• Attempt to deconstruct choosing words for emphasis (teachers only)</li> <li>• Model during practice: coordination of pausing, vocal emphasis, gesturing</li> </ul>	(1) <ul style="list-style-type: none"> <li>• First invited guest (principal)</li> <li>• Active monitoring of audience comprehension</li> </ul>	<ul style="list-style-type: none"> <li>• CBM readings</li> <li>• Continue prereading, postreading checks</li> <li>• Brief, individual coaching for word attack and phrasing</li> </ul>
8	(2) <ul style="list-style-type: none"> <li>• Preteach key concepts instead of challenging vocabulary</li> </ul>	(2) <ul style="list-style-type: none"> <li>• New scripts</li> <li>• “Main idea” anchor for choosing words to emphasize, with class exercises</li> </ul>	(1) <ul style="list-style-type: none"> <li>• Second invited guest (teacher)</li> <li>• Use SLANT with audience</li> <li>• Increase audience comprehension goal and continue active monitoring</li> </ul>	

(table continues)



**Table 1. (continued)**

Week	Quick Reads® (QR)	Performance Practice	Performances	Monitoring
9	(2) <ul style="list-style-type: none"> <li>• Teach how to use whole text to answer questions</li> <li>• Teach how text teaches vocabulary</li> <li>• Regiment timing of each Read and its segments, such as prereading “think time”</li> </ul>	(2) <ul style="list-style-type: none"> <li>• Continue practice with same script for improvement</li> </ul>	(1) <ul style="list-style-type: none"> <li>• Third invited guest (teacher)</li> <li>• Continue audience comprehension focus with Boys vs. Girls goal</li> </ul>	<ul style="list-style-type: none"> <li>• Final CBM reading</li> <li>• No coaching</li> <li>• GORT-4 posttest</li> </ul>
11-12		(8) <ul style="list-style-type: none"> <li>• New scripts, length tripled</li> <li>• Class views videotape of Grade 3 made during Week 10 while Grades 4-6 away</li> <li>• Facilitate practice to videotape</li> <li>• Groups called in to be videotaped</li> <li>• Review tape end of Week 11 to improve Week 12</li> </ul>	(2) <ul style="list-style-type: none"> <li>• Show videotaped performances</li> </ul>	No further data collected

*Note.* References are to the instructors, not students, unless otherwise stated. Number of days for each instructional component is shown in parentheses.

researcher and assisting teacher decided on a direct approach, the explicit naming and modeling of fluency elements (Reutzel, 2005).

### **COMPONENT 1: SILENT REPEATED READING WITH SCAFFOLDED TEXTS**

The initial plan called for students to read 15 minutes daily from QuickReads®, a graded set of vocabulary “scaffolded” science and social studies texts developed by Hiebert (2003a; see Appendix G), at their developmental level within Hiebert’s (2008) “fluency curriculum” (Appendix A). The fluency curriculum is based on the most frequently appearing words in English texts (Zeno et al., 1995) and a theoretically determined progression of within-word spelling patterns similar to that advocated for ELLs (Bear et al., 2003). Due to the narrow selection of participants, it was expected that students would fall into two or three of six text levels provided by the publisher, but they actually tested into five of the six levels, which complicated delivery. Each student’s placement at a level was guided by an oral-reading assessment provided with the QuickReads® program, with corroborating information from the screening assessments.

Instruction began with the standard teaching protocol for QuickReads® (Hiebert, 2003a), shown in Figure 1, which was modified to address student needs as the intervention progressed. This protocol consists of concept and vocabulary anticipation followed by three silent, repeated readings: (a) independent, untimed; (b) assisted by a fluent model (teacher or recording); and (c) independent, timed, with Words Per Minute charted by the student. The readings are followed by completion of comprehension questions. Each short text is just over 100 words and meant to be read in 1 minute. One text is normally

----- FIRST READ -----

1. Say to students, “Before you read, think about what you already know about the topic. Also, look for two words that might be new and challenging. Underline these words.”
2. Then, ask students to read the passage aloud or silently. They may take as much time as they need.
3. After they read, tell students to write on the graphic organizer a few words or phrases that will help them remember what is important about the topic. The graphic organizer is located at the beginning of each Review section in the Student Editions.

----- SECOND READ -----

1. Say to students, “Now I’m going to read aloud with you.”
2. Then, read the passage aloud at the target rate of one minute.
3. Ask students, “What is one thing the author wants you to remember?”

----- THIRD READ -----

1. Say to students, “On the third read, your goal is to read as much of the passage as you can in one minute.”
2. Then, tell students to read silently as you time them for one minute. Tell them to circle the last word they read when you tell them to stop.
3. Ask students to write the number of words they have read at the bottom of the page. Then, ask them to review in their mind what is important to remember from the passage.
4. Assign the comprehension questions in the Review section to check that students have understood what they have read.

**Figure 1. QuickReads® instructional routine. Source: Hiebert, E. H. (2003a). *QuickReads*. Parsippany, NJ: Pearson Learning Group, pp. 11-13.**

covered each day, and each series of five texts are thematically related. Both teachers received 1 hour of web-based, personalized training on this protocol from the publisher.

## **COMPONENT 2: REPEATED ORAL READING FOR PERFORMANCE**

The initial plan was for students to practice instructional-level texts aloud in small groups, during the second 15-minute period, and perform intermittently for the whole class. How often the students would perform was not determined ahead of time and was expected to vary depending on the length of scripts and engagement of the students. Brief direct instruction, henceforth referred to as “mini-lessons,” about aspects of oral-reading fluency such as expression, volume, phrasing, smoothness, and pace, was expected to occur during this time.

The performance-reading component is based on a body of Readers Theatre reports in peer-reviewed journals (Corcoran & Davis, 2005; Griffith & Rasinski, 2004; Martinez et al., 1999; Peebles, 2007; Rinehart, 1999; Worthy & Prater, 2002) and practitioner books (Black & Stave, 2007; Flynn, 2007; Rasinski, 2003). The initial plan was that the Multidimensional Fluency Rubric (MFR; Rasinski, 2008; Appendix D) would be openly displayed and referred to with the students, as well as used for assessment. However, a simpler chart listing fluency elements was used to start off the instruction, and the full MFR was not used with the students. Any of a variety of possible modifications to this portion was anticipated to be made as the experiment proceeded, including the inclusion of fiction and poetry texts (Rasinski, 2003), children selecting and scripting their own texts (Flynn, 2007; Rasinski, 2008), audio/video self-monitoring by the students (Boisvert, 2006), and use of phrase-cued scripts (Rasinski, 1994).

Initially, performance texts were to be scripted by the researcher from the QuickReads® selections currently being practiced in Component One. Suggestions for the scripting of such texts are suggested in practitioner books (e.g., Flynn, 2007). Since these are nonfiction texts, students would be coached to read them in the role of a radio announcer or TV-special narrator. From there, according to student motivation and need, scripts might diversify into ready-made fiction and poetry scripts (e.g., Rasinski, 2008, p. 125) or even student-written scripts (Flynn, 2007; Rasinski, 2003). Many suitable scripts are available on-line and in book form or can be fairly easily adapted from story or nonfiction material (Reutzel, 2005). The researcher began by modifying QuickReads® as scripts (see Appendix H), leaving the possibility for other types of scripts open; the QuickReads® scripts continued to be used throughout the 7 weeks of performance practice, with new scripts presented weekly.

### **Phase Four: Formative Data**

The researcher collected regular formative data listed below as evidence, or counterevidence, that students were moving toward the pedagogical goal, allowing adjustment of the instruction.

- Daily notes and reflections in a research journal. The researcher debriefed with the assistant teacher daily, most often by e-mail, recording notes on the day's instruction as a whole and the participation of individual students. The research journal was also used to record pedagogical decisions and to reflect on unanticipated outcomes of the experiment.
- One-minute CBM probes of participants reading unpracticed text aloud, as described in the Baseline Assessments section. The goal was for the researcher to conduct one probe on each student once a week and chart the results for each student.

- Audio or video sampling of practice sessions and performances. This was not considered critical to the study and decisions about its use were deferred, depending on instructional management priorities and motivation and engagement of students. Videotaping of performance was used pedagogically during weeks 10-12, after data collection was complete, but not as data for student assessment; the experience is shared briefly in Chapter 4, but is not a formal part of the study.

Procedures for maintaining confidentiality of all data were detailed in the protocol document for San Diego State University's Institutional Review Board.

### **Phase Five: Post Assessments**

The researcher repeated the assessments done at Stage Two and performed miscue analyzes of the GORT-4 passages, pre- and post-, for all students.

#### **GRAY ORAL READING TEST (GORT-4)**

Form A served as a pretest and Form B as a posttest.

#### **MULTIDIMENSIONAL FLUENCY RUBRIC (MFR)**

Each student's oral text reading during the GORT-4 Form B was audio recorded and analyzed by two raters, the researcher and the assisting teacher, on the MRF 4-point rubric. The rating of oral reading from GORT Form A served as a pretest and rating of reading from Form B as a posttest.

For each student, two passages in sequence, by level, were chosen to compare pretest to posttest. These passages were the two most advanced passages read by the student before control over Fluency and Comprehension dropped off, according to the GORT scoring system. In many cases, a student was able to read more advanced passages on the posttest than on the pretest. In those cases, the passages chosen were at the most advanced levels

where the student still had control over Fluency and Comprehension on the pretest. In one case, three passages were evaluated because a clean decision about any two could not easily be made. In another case, the passages skipped a level because the recording on the intervening passage for Form B was cut off by an unwarned battery failure.

The MFR was adapted by the researcher to a scoring worksheet (Appendix I) with key words notated for each component and space for comment. Each rater completed the MFR scoring sheet for each reading, listening to the recordings as many times as needed to pay attention to each of the four components. Half-scores (1.5, 2.5, 3.5) were allowed. The researcher also annotated the rubrics with notes she had made while scoring the GORT. The 16 data points for each student were tabled and compared between raters. Discrepancies were analyzed before combining the scores into a single rating. Discrepancies of 0.5 point were ignored. Discrepancies greater than 0.5 point were reconciled by having both raters listen to the recordings and discuss their reasoning. Then one or both raters adjusted their ratings until both scores were within 0.5 point of each other. Following reconciliation, both scores were averaged for each data point.

### **FORMATIVE CHARTS OF CBM MEASURES**

Weekly charts (Appendix F) for each student may also serve as summative evidence of reading growth. For the participants in this study, the data did not lend itself to graphic interpretation, as planned, and simple tables were used. The difference between a student's initial and final corrected reading rates (WCPM) was used as a measure of her reading fluency growth. Various patterns of change were observed and are described in Chapter 4.

## **MISCUE ANALYSES OF GORT-4 PASSAGES**

GORT-4 analysis showed that for many students oral reading Rate decreased and reading Accuracy increased pre- to posttest. Therefore, miscue analyses of the GORT readings were made for every student to investigate how their cueing patterns might be changing. The first 25 miscues on Form A were analyzed, unless fewer than 25 miscues were made overall; miscues were analyzed for the corresponding passages in Form B. For students who showed fewer miscues on Form B, additional passages were analyzed for a total of 25 miscues.

### **DATA ANALYSIS, PHASE SIX: CONSOLIDATION AND REPORT OF FINDINGS**

During Phase Six, the achievement of the pedagogical goal was evaluated quantitatively and descriptively. Achievement of the pedagogical goal, individual improvement of oral text reading fluency and overall reading ability, was expected to be evaluated statistically, both descriptively and inferentially, using *T*-tests of pre- and postassessment scores. Curriculum based measurement oral-reading progress for the students was expected to be indicated graphically (Appendix F). Based on descriptive results, inferential tests were not made. The CBM oral reading charts did not indicate typical inclines that would have lent themselves to the graphical display format.

Ongoing pedagogical decisions and progress of the experiment are detailed in a narrative format, along with unanticipated outcomes. Data for the narrative come from daily reflective notes in the researcher's journal, including e-mail exchanges between the researcher and assisting teacher, which were evaluated periodically as the intervention proceeded. The narrative was and is intended to "bring alive" the story of the intervention



with verisimilitude, rather than analyze qualitative themes exhaustively. However, it was left open that, if powerful themes were suggested, the journal might be coded for themes using a direct interpretation method (Creswell, 1998). Instead, the design of the formative experiment suggested four categories, and the notes were tabled accordingly: Instructional Decisions, Noticings (student behaviors), Monitoring Decisions, and Environmental Changes. Instructional Decisions and Noticings were further subdivided, coded by color, to reflect the two components of the intervention: the QuickReads® repeated reading protocol and reading practice for performance. The final narrative is similarly organized, with finer themes informally reflected as weekly headings within each narrative. This narrative was shared with the assistant teacher, as a member check, and modified accordingly.

To assist in organization and interpretation of findings, the researcher also constructed a case report for each student which details scores and anecdotal notes for GORT-4, MFR, CBM, language history, schooling history, health history, participation in ELD and other programs at Carver Elementary, and motivation/participation. One of these case reports is shown as Appendix J.

## **CHAPTER 4**

### **DATA ANALYSIS**

Results of the study are presented in two overarching sections, Intervention Decisions and Reading Achievement. Intervention Decisions is a qualitative, rich description of the intervention, organized into six parts. Reading Achievement presents quantitative and qualitative data for student reading achievement, in six parts.

#### **INTERVENTION DECISIONS: OVERVIEW**

The following six sections comprise a qualitative, rich description of the intervention, organized into five narratives related to instruction and one thematic interpretation of remaining research notes related to noninstructional variables. Narratives make use of “I” to refer to the researcher, “Bill” to refer to the classroom teacher, and “we” to refer to the researcher and classroom teacher, as co-instructors.

1. Overall Scheduling  
This section narrates ongoing decisions about the overall scheduling for the two instructional interventions, QuickReads® and performance reading.
2. QuickReads® Protocol  
This section narrates observations and ongoing instructional decisions about use of the QuickReads® protocol, organized by week. This includes decisions about fluency lessons directly related to the QuickReads® protocol, although these lessons were taught during the alternate days when the students practiced for performance. Major trends or themes are reflected in the weekly subheadings.
3. Performance Practice  
This section narrates observations and ongoing instructional decisions about performance-reading practice, organized by week. This includes decisions about

fluency lessons directly related to performance practice. Major trends or themes are reflected in the weekly subheadings.

4. Reading Performance

This section narrates observations and ongoing decisions about reading performance. Major trends or themes are reflected in the weekly subheadings. Actual reading performance both reflected and informed reading practice and took on significance of its own. For this reason, it is presented as a separate narrative but organized by week, so that the two aspects of the intervention, performance-reading practice and reading performance, can be readily cross-referenced.

5. Weekly Individual Monitoring

This section narrates observations and decisions made during the weekly Curriculum Based Measurement (CBM) sessions with individual students.

6. School and Classroom Factors

This section interprets notes about noninstructional variables of the intervention according to three sub-themes: Age Diversity, Study Inclusion, and School Culture.

### **INTERVENTION DECISIONS: OVERALL SCHEDULING**

Two days before the study class convened, I (the researcher) visited the existing Intermediate English Language Development (ELD) class for Grades 3, 4, and 5 and explained to the children the change of location, teachers, and focus that would occur later in the week. I met separately with the Grade 6 participants and their teachers. The switch occurred on the last full instructional day of the week, a Thursday.

Instruction proceeded four out of five school days a week over the subsequent 9 weeks. The first full week of instruction is considered Week 1. The first 3 weeks were 3- or 4-day weeks, due to February holidays. After that, we moved to 5-day weeks to accommodate a period for performance. Postassessments were done during the ninth week, instead of waiting until after the spring recess, a period of 4 weeks when teachers and students are not at school.

Following the spring recess, we continued the class for an additional 3 weeks to experiment with videotaped performance reading. This portion of the class was not formally studied and is summarized briefly at the end of the Performance Practice narrative.

Decisions about how to distribute the QuickReads® and performance reading portions of the instruction over the 30-minute period, 4 days a week, changed twice during the first 3 weeks before we settled into what was to become our routine for the remaining 6 weeks: QuickReads® protocol Monday and Wednesday, fluency lessons and performance practice Tuesday and Thursday, performances on Friday. QuickReads® is designed to be a 15-minute protocol. Initially, we anticipated this would leave us 15 minutes for fluency mini-lessons and performance practice. However, we were never able to get the children to complete the QuickReads® protocol satisfactorily in less than 20 minutes without compromising their time to complete comprehension questions. We also added a vocabulary preview that was not originally planned, after observing that many students (a) chose “remember” words, a few words or phrases that would help them remember what they had read, that did not hold key meanings, and (b) failed to answer comprehension questions satisfactorily following three reads. These observations and decisions are detailed in the narratives that follow. Additional minutes were also needed for us to read the passages aloud to seven groups covering five instructional levels. Instructional levels and grouping were modified for some students at the beginning of the third week.

### **INSTRUCTIONAL DECISIONS: QUICKREADS® PROTOCOL**

At the introductory meeting, following instructions for greeting the teachers, entering the room, sitting in the whole-class gathering area, and maintaining a “no putdown zone,”

the children were asked what they thought it means to “read fluently.” A single contribution, from a sixth grader, was the idea that “you have to say the words right.” Bill and I presented a chart titled “Reading Fluency,” which listed six elements of fluency, and proceeded to give a brief, student-friendly explanation for each element: Pace, Expression, Volume, Phrasing, Smoothness, Comprehension. We filled in the chart as we went and gave a brief demonstration for some of the components. Notably, the student’s single contribution had not been included in our list; when the class resumed Monday it was named Accuracy and added to the chart. This chart was referred to throughout the 9 weeks of instruction. Following the presentation on fluency, we explained to the children that the class would be reading short texts from QuickReads® books. We pointed out the pages and features we would be using each day, from chart-sized enlargements of the pages: picture-with-caption (left facing), passage text (right facing), graphic organizer for “remember” words, timed-reading recording chart, and review questions.

### **Week 1: Learning the Protocol**

The first two days, we modeled the procedures for Read 1, Read 2, and Read 3, using enlarged passages from a Level B QuickReads® book. The publishers’ protocol for the three reads is shown in Figure 1 (p. 100). Students practiced each of the reads, which include supporting activities, after observing us model it using our demonstration passage. The rest of the week we refined transitions and coordinated the protocol, challenging the students to complete it within 15 minutes. The best time was 25 minutes. Following Read 2, we asked students to summarize the author’s intent through group discussion; we assigned table

monitors, rotated weekly, to record each groups' ideas on a 3x5 card, so we could review them later.

Several challenges surfaced immediately. Our first was to efficiently read aloud to seven groups covering five instructional levels, for Read 2. This was accomplished by (a) starting some groups earlier, before they had completed the "remember-word" activity for Read 1; (b) splitting the reading between us; and (c) combining the shared reading for groups who were at the same level. Our second challenge was to convince several of the older students who were racing through Read 3, the timed read, to slow down and read for meaning and expression. I noted in my journal on February 5, "Several students are racing through the timed read and clocking over 200 words per minute. They need to be slowed down soon. I spoke with [student] and [student] about it." We also decided to break up a larger, higher-level group into a triad and a diad for the following week.

Figure 2 is a sampling of an e-mail conversation between Bill and myself at the end of Week 1, showing an "interactive" style of exchange we employed. This transcript illustrates our negotiation process, particularly in the first 3 weeks as we established workable routines, as well as the types of details that I condensed into weekly summary notes. It also shows my self-reflection as a researcher. These exchanges between Bill and myself were incorporated into my research journal, which was printed and kept in a dated binder. Each day, I summarized what we had done in class, reported observations of students, and made suggestions for possible changes, either immediate or to consider for the future. Bill responded by replying. In the Figure 2 transcript, I am responding further to Bill's reply, by inserting my responses in a different color, shown here as italics. I have also inserted [B] and

[B] I definitely agree that the comprehension part is missing, and for the most part these kids are just saying the words and not thinking about what they mean and have learned from the passage.

[K] *OK, So let's drop the timing on Third Read. This is critical. The disparity between the rates they are reporting for silent reading and the functional rates (for oral readings, less miscues) is HUGE. Also, I think some of the kids were definitely misplaced and I will be moving them down. I find that I have to listen to each recording about three times to catch all the miscues, so I may have understated their miscues and overstated their rates when I placed them. That's just me as a rusty diagnostician. Bad researcher! I "rushed" through the placement process in the first place, because of the holiday coming up, did not take time to listen back [to recordings] as I should have.*

[B] Perhaps just a brief mention that these are short nonfiction texts with a topic, that they should be learning new facts each and every day. That is the expectation.

[K] *Yes.*

[B] We could even do a short writing prompt at the end, what have you learned about \_\_\_\_\_ ?

[K] *There is a Log in the book for that, which we skipped over. We could use that. Drop the timing and add the Log. Don't let anyone leave who has not completed the Review [questions] and the Log.*

[B] We could use that to show the kids they are not getting it, or they are and good for you! There are so many possibilities here. I agree with the 3rd read, perhaps we tell them to do the 3rd read [re-read it] until they are ready to answer the review questions, and that they can go back to the text if they need. Once we see someone do that, would be a good time to conference with them about what was missing, did they not get the text or did they not understand what the question was asking, sometimes (usually) that is a major factor.

[K] *You did not comment on my idea of giving some aspects of the vocabulary up front, including alerting them to vocabulary from the questions, such as "compare." The fact that so many continued to underline the same "challenging" words that had been taught in the passage!*

[B] I don't want to stray too much away from getting them used to the procedure, so maybe the words and comprehension part and save the punctuation aspect for a mini lesson later in week or next.

[K] *We'll save the punctuation for later, except I still like the idea of saying PAUSE when we do Second Read. We don't have to make an issue of it, but we need to start training them somehow. You didn't comment about that.*

[B] I agree that we should do a mixture of performance and mini lessons for now until they get the importance of comprehension. Perhaps at the end of the first cycle [QuickReads unit] we could meet with each group and have a discussion about what they learned or a writing assessment (mentioned earlier).

[K]. *The first cycle will end in 2 more days, leaving 1 day this week. Maybe we could introduce scripts on that days, scripts from the QuickReads. My only reluctance is that I will be moving some kids down and they won't have read the passages. It feels like a mess, until I get that done. It may take me a couple of days to make this change. I want to be sure and not mess it up. That would be doubly confusing for them. The structure of the protocol is meant to be a support and I don't want to change it up too soon.*

[B] Since we only have 3 days this week and next, I think we need to be careful about how much we add on/change to what we want them to do in the 15 minutes. Let me know what you think.

**Figure 2. Researcher-teacher e-mail exchange following Week 1 instruction.**

[K] to indicate who has “spoken.” It has a somewhat choppy quality because it presents as dialogue but is not. This particular transcript is reflected in the Week 2 narratives.

## **Week 2: Unanticipated Choices by Students**

During this week, which had only 3 instructional days due to a holiday, we set time goals for completion of QuickReads®, beginning with 20 minutes and reducing it to 18, with the idea that we would eventually get it to 15. However, the best time remained 20 minutes.

Some students continued to “speed read” for the timed Read 3 and further challenges emerged. I noted on February 8, “Many of them are underlining the same key word (e.g., ‘immigrant’) in all the passages, even though it was taught in the first passage!” Some children self-selected (underlined) the same challenging words, prior to Read 1, in subsequent passages, suggesting they had not assimilated the words into their reading vocabularies or were not paying close attention to their own meta-cognition around learning new words. Some children selected words that they clearly did not understand or could not pronounce, as based on teacher observation later in the day’s protocol. Moreover, we observed that many students were making poor choices of words and phrases to help them remember what they’d read after Read 1. Despite the deliberate repetition of multi-syllabic words that are either defined or readily inferred and that hold key meanings, these words were often not the ones the children were choosing. Some students simply copied a sentence from the passage. Finally, many students were not completing both comprehension questions after Read 3. The first is a multiple-choice question that addresses the main idea of the passage. The second is a question requiring short-answer details from the passage. In our e-mail correspondence, Bill showed concern that students were not connecting to the purpose of



reading short, nonfiction texts, namely, to learn new information about a topic. The instructional levels I had assigned through preassessment fell into question.

In response to these observations, we made several changes proposed in an e-mail to Bill on February 8 and summarized in my notes on February 11. The February 8 correspondence reflects a watershed weekend when we realized how significant the comprehension component of our instruction was going to be:

Since speediness appears to be an obstacle to comprehension . . . why don't we just suspend the timing (for now) on the Third Read, but everyone begins at the same time and we make the challenge the comprehension? This is only a minor adjustment to the protocol, instead of interfering with the flow of the cycle, but it sends the message of how important it is to understand.

Overall, we made the decision to find ways to emphasize comprehension more, without teaching comprehension strategies directly and thereby changing the nature of the intervention as repeated-reading instruction. Over the weeks of the study, this became our strongest and most challenging goal.

Instructional levels were reviewed, based on information from CBM sessions (see Weekly Monitoring). Through modeling, we attempted to demonstrate to the class that “speed reading” resulted in poor understanding, but this had no immediate effect on the target students so we suspended timing of Read 3, as noted above, with the idea that we might pick it up again later, once “speed reading” was mitigated. We assumed that if students were racing through Read 3, they were not attending to phrasing, particularly the natural phrasing provided by commas and periods; this was corroborated by observations during CBM sessions. We decided to highlight punctuation marks by briefly saying PAUSE aloud during shared Read 2, in a light monotone distinct from the tone used for the text.

In response to students' choices for selecting unfamiliar words before Read 1, and for recording key "remember" words or phrases following Read 1, we decided to preview potentially challenging words for each group. The teacher-selected words were displayed in a grid on the white board, with one square for each level, and reviewed quickly in front of the whole group. Table 2 shows the selections for Unit 2, tabulated by instructional level (vertical) and passage (horizontal). We pronounced each word and had the children repeat the word aloud. We defined a word if it could not be determined from the passage; otherwise we directed the students' attention to the word and told them it would be defined for them or they would be able to figure out its meaning. Instead of underlining any of these words, prior to Read 1, children were directed to find two additional words that they might not know the meaning of or weren't sure how to pronounce; they had the opportunity to ask us about these words as we came around.

To address incomplete responses to review questions, I began marking visual feedback in the workbooks each day next to the responses. Initially, this took the form of smiley faces next to accurately answered items and circling key words in the directions that had not been attended to, such as "two reasons" when the student had given only one. From previous experience coaching students in Question-Answer Relationships (Raphael, 1982, 1984), I determined QuickReads® questions to be quite literal, with answers readily found in the text. Further, we insisted that both Read 3 and review questions be done in silence, and we dismissed tables to lunch only when students had completed the work. (In practice, this was not always possible, as we were under a timeline to get the children to lunch before the cafeteria line closed.)

**Table 2. Teachers' Vocabulary-Preview Selections for Unit 2**

Passage (1-5) Level (A-F)	1	2	3	4	5
A	<b>sight</b> night light sense(s) – G rain/bow	<b>cane</b> – G	<b>spring</b> aid – G (help)	them/selves	<b>switch</b> – G
B	symbol – I	<b>stripes</b>		<b>feather(s)</b> breath death bread dead	pledge – G (promise)
C	giant – G	<b>weigh</b> – I sleigh <b>swing</b> – I	ostrich(es) – T	giraffe	reptile(s) – I crocodile – T salt/water – I
D	constitution – G citizen – R	election – G guarantee – G (promise)		opinion – G	situation – G
E	photosynthesis – T carbon dioxide – I oxygen – I	crop(s) – I grafted – I	pluot – T aprium – T cross- fertilization – T	green/house – I hydroponics – T (water)	ethanol – T aspirin – I
F	pioneer – G preserve – T /z/	human rights – R (safe and free) delegate – G	enroll – I	space/craft – I	immunodeficiency – T deficient – T immune system – T

*Note.* G = give meaning; I = infer from text; T = text defines; R = reminder. Phonics patterns are indicated in boldface.

During this week, a significant number of students continued to demonstrate confusion about the QuickReads® procedure, in spite of a simplified protocol printed on a large card at every table. This confusion is documented in detailed notes I made for each student while reviewing their workbooks on February 8. Many comments indicate confusion, such as “Graphing [word number] 124 every day but doesn’t match circling,” “Circled last number

on each, not a word,” “Last read [word] 213 but graphed 102,” “Underlining same words instead of two different words,” “Not underlining two words (just one),” “Underlining same word in all three [passages],” “Circling multiple words instead of underlining,” “Underlining many words [instead of selecting two],” and for *many* “Circling last word in each passage” and “Didn’t finish Review [questions] on [date].” The children still had not completed the QuickReads® protocol within 15 minutes.

We were eager to begin fluency mini-lessons and performance practice, so we decided not to take more whole-class time for QuickReads® procedures. Instead, I decided to suspend CBM readings the following week and use that time to reinforce the QuickReads® procedures in small groups. We used the last day of this 4-day week to model how to practice a script for performance, instead of doing a QuickReads® routine.

### **Week 3: Slow Down for Performance Practice**

We modified table groupings to reflect changes in instructional levels determined during weekly individual sessions. The students cooperated with the changes, but transition to the new passages was messy, as were transition behaviors in general. To address the continued confusion about the QuickReads® protocol, I skipped CBM readings this week, called in students who worked together at a table and reviewed the steps with them, checking for understanding. On February 16, I noted, “After marking the workbooks today, I am perplexed by the lack of understanding of both the routine and the passage itself. Especially, I see a great number of students who do not write their answer to question 2 based on what the passage says. I have decided that, instead of 1-minute reads Thursday and Friday, I would like to meet with pairs or trios of students from the same group for 5-10 minutes to review

expectations for the workbook.” We spent most of these sessions, about 10 minutes, on when and how to complete the workbook organizer and questions. I could not meet with everyone the first day or two and comprehension questions continued to reflect confusion about the passages. In particular, the response to Question 2, requiring a hand-written answer of a sentence or two, was often not based on information in the passage, but was interpreted by the student as a free response.

In order to have time for performance practice, we alternated portions of the QuickReads® protocol, completing Reads 1 and 2 one day and Read 3 the next. This reduced the number of passages read that week to two. We assumed we would return to one passage a day, with expectation that it be completed in 15 minutes, once the procedures for performance practice were in place. The remaining time each day was given to fluency mini-lessons (demonstration with a brief try-on by students while they were still assembled as a whole group), followed by performance practice in table groups.

### **Weeks 4-5: More Attention to Comprehension Needed**

Nearly halfway through the planned intervention, we were faced with a dilemma. Our definition of fluency included comprehension but, if we were to start teaching comprehension strategies directly, we could no longer characterize the intervention as fluency-based. It was also clear that 15 minutes for the routine was not tenable for this group. We conceded that the comprehension questions had to be allotted more time, with look-backs allowed, in alignment with our goal to keep students focused on comprehending the passages. My notes of February 23 include this reflection:

I guess we have to concede that, with the vocabulary preview and so many groups to read to, it takes a class period [25-30 minutes] for the full routine, to give the students time to give the comprehension questions their full attention. Even with the time, the lack of comprehension is glaring to me right now, and it is abundantly clear that reading the passage three times is not a fix for many.

During Week 4, we settled into the routine which defined the remaining 5 weeks: an entire QuickReads® routine for one passage on Monday and for a second passage on Wednesday; Tuesdays and Thursdays were given over to fluency mini-lessons and practicing scripts for Friday performance.

Two refinements were made to the QuickReads® routine to increase the children's attention to comprehension and make their efforts more public. First, I created a "Got Comprehension?" chart to track individual students' success with the review questions. If a student answered both questions accurately, he received a gold star; for one question, a silver star. I began writing "½" next to Question 2, the handwritten-response, if the student gave partial information that did not fulfill the question as written, or provided a too-short or superficial answer that required further explanation to answer the question well. For example, a question requesting two reasons for a phenomenon and the student writing about only one would receive "½." This practice was meant to encourage the students to pay more precise attention to the questions. The incentive chart was a hit with the students; they rushed to view the chart each day to see how they had done.

Second, we wanted better table discussion and consensus when the students talked in their groups, a part of the published protocol following Read 2, about what they think the author wants them to remember. We replaced the 3x5 card with a 3x5 adhesive note and asked the table monitor to place it inside their group's square in the vocabulary-preview grid. This helped with accountability and pacing and allowed us to see the groups' understandings

at a glance so we could intervene after Read 3. We reinforced the importance of the vocabulary preview, the idea that it is not acceptable to get to Read 3 and not know the words, and the importance of the “think time” before Read 1 and the group talk after Read 2.

From the star chart, we continued to observe that, following three readings, only a handful of students did an adequate job on review Question 2, the handwritten response question. They were far better at multiple-choice Question 1, but some were missing that, too. Question 1 usually addresses the main idea of the passage, so we thought that some children might not be making use of the passage title to assist them, in spite of reminders to direct their attention to text features during prereading “think time.” It seemed as if they did not connect prereading thinking to the thinking required to answer the questions later, as if they compartmentalized those activities. If so, we would need to help them see the relationship. We also noticed that many used the information in Paragraph 1 or 2 of the passage, but not both, to answer Question 2. Many appeared not to know what certain question types are asking for, particularly “how” questions, and we thought they might be confused by subtle idioms contained in the questions, such as “stands for.” In response to these observations, I taught mini-lessons in which I modeled use of the title to “think” before reading and, later, how to crosscheck the unit title, passage title, and picture/caption to “think” before reading. I was also emphasizing these prereading strategies with individual students during CBM sessions.

During Week 5, at Bill’s suggestion, he took some time to explain again to the students that they were part of a study and why the study was important. My notes of March 4 remarked, “I felt so appreciative that Bill took the time to discuss my study with the kids. In the day-to-day reality of running the class, I often forget my own context.”

### **Week 6: Group Incentive, Magic Headphones**

The “Got Comprehension?” chart had students’ attention, but we sensed that it was not entirely positive for our class’s growth as a learning community. We decided to de-emphasize individual competition for gold stars by keeping track of the daily total of gold and silver stars for the class as a whole. We asked the students to beat their best of 11 (of 27 possible). This appeared to have a strong effect on the motivation of the students, many of whom were willing to stay an extra minute or two past the end of class, if necessary, to look back at the passage and do their best job on the review questions. We set the goal at 18, but lowered it to 13 for the second passage when they failed to come close on the Monday passage.

However, the students’ struggle with comprehension questions continued. It was a perplexing point in the study for Bill and me. On March 9, I noted,

I feel discouraged. They are not, as a whole, using what they discuss as a table group to help them with the second question. Many do not appear to understand the different types of questions or how to approach them, and many are still not going back to the passage for obvious answers, despite reminders. Only 8 [of 28] gold stars [both answers complete and accurate] today. Bill and I talked afterwards, and he thinks they are rushing the third read and may need to read orally.

We observed bickering during table discussion, and most students did not seem to be using the discussion to help with Question 2, in spite of explicit reminders. As noted above, many students appeared not to understand the different types of questions and how to approach them and were not going back to the passage when stuck. We had noted that QuickReads® questions are more literal, less inferential, than many of the reading comprehension questions on the California Standards Test, and had reasoned they should be relatively easy for the



children. Bill suggested that maybe I was speaking too fast, during whole-class instruction, for students to follow.

Many students seemed to be rushing through Read 1, despite my emphasis on careful prereading in the CBM sessions, and Bill thought many were rushing through Read 3. He surmised that students might not be transferring meaningful prosodic behaviors from the oral-fluency exercises and performance practice, into their silent reading. We decided to turn Read 3 into a whispered read in which students hear themselves pausing and emphasizing words by cupping their palms lightly over their ears to simulate headphones, a practice he uses in his classroom and calls “magic headphones.” Students were not to verbalize the pauses, as we did for Read 2.

Some students were sneaking ahead to the comprehension questions after Read 1 or 2; prereading of comprehension questions had been reinforced during state-test preparation for the sixth graders and was viewed with evident pride by them. During performance practice of previously read passages, one study participant was quite vocal about his confusion over vocabulary words he had read many times, including words that we had previewed and made him responsible for understanding by the end of Read 3. We both were troubled by this and wondered how many of the other students shared this confusion and did not voice it. We noted that students were struggling with words defined for them in the text. Some were simply copying the vocabulary preview words from the grid as their list of “remember words” after Read 1. Reviewing workbook responses, it was sometimes difficult to decide, for Question 2, whether a student had the idea but couldn’t articulate it well in writing or was missing the idea, so I made an effort to give more half credit. We modeled and reinforced (a) how review Question 2 is related to the group talk following Read 2, and (b) the need to

answer Question 2 from the passage, considering both paragraphs. The quality of ideas on the adhesive notes summarizing group talk improved noticeably, but temporarily, following that lesson.

My notes reflect many more teaching possibilities than we implemented. Some of these reflect the tension I felt between remaining true to repeated reading and addressing comprehension more directly. For instance, on March 11, I stated:

It is clear to me that I have to find a way to get the students to focus on key words in the comprehension questions such as “why,” “how,” “difference,” etc. I think I should make a review of types of questions and key words, to get a better sense of how I might draw their attention better to the meaning of the questions, without turning our intervention into one on test-taking or comprehension strategies.

Although we did not address this formally, with the whole class, we did start coaching students more actively during the comprehension Review time.

During this week I also noted the following personal insight, “I am still amazed at how well English language learners (ELLs) have managed to fake me out in the past. [Student], for example, really surprises me. She was in guided reading with me 2 years ago (second grade) and I am only now really getting the degree to which she struggles with syntax.”

### **Week 7: Coaching Comprehension**

We lowered the gold-stars goal to 12, and the class finally beat it with 14. Reflecting observations during CBM sessions, whole-class vocabulary preview now included more word analysis: I pointed out some within-word patterns, open/closed syllables, word parts/roots/families, and taught a mini-lesson on using vowels for long-word decoding. I continued to swing through it quickly, asking for echoed responses, with the idea that with repetition,

some of it would stick. We started to coach table groups briefly on how to answer comprehension questions, following Read 3. We noted lots of “ahas,” and I wondered in my journal “Is it that they don’t read the question carefully or that they don’t understand it?” During this week, the groups’ adhesive-note summaries following Read 2 showed improvement in the children thinking together about what is important to remember from the passage.

### **Week 8: Preteaching Key Concepts**

The new goal for gold stars was not met, although we coached groups actively following Read 3, and many students were willing to stay a few extra minutes at the end of class to make their best effort. Students continued to use only part of the passage to answer questions, rather than think about contributions from both paragraphs, and too many failed to get the gist after three reads. We ourselves tuned in carefully to how the wording of the question can be tricky and how some passages are more abstract than others. On March 23, I reflected in my journal,

There was a particularly awkward question for Animal Communities passage 1 today. . . . Instead of so much emphasis on word analysis with the vocabulary (which is based on what I’m seeing during the weekly reads), maybe I should be preteaching key *concepts* during this time. For instance, if I had pretaught “permanent” and contrasted it with “temporary” (which wasn’t used in the Animal Communities passage, though the concept was), I am willing to bet they would not have struggled with it so much. It is always a struggle for me to figure out how much to tell the students and how much to leave for them to figure out. But using the idea of abstract concepts may help me frame that better for them in the future.

After considerable deliberation, including a consultation with our principal, over the optimal amount of teacher scaffolding for texts that are already scaffolded in their structure and

progression, we decided to change the whole-class vocabulary preview from emphasizing unfamiliar words to preteaching the key concepts of each passage.

We also observed that many students were not underlining challenging or unfamiliar words after Read 1. Many were holding their hands tightly over their ears during Read 3, instead of loosely, so that they may have been hearing their voice muffled or distorted.

### **Week 9: Using the Whole Text, Timing Reading Segments**

To address the observation that students responded to review questions with information from only one of the two paragraphs, we gave a mini-lesson about using the title and entire passage to answer the questions. We also started a lesson on four ways the text teaches us words, but left off halfway, due to time.

The preview segment had been kept to about 5 minutes. With the key-concept approach, a new challenge appeared. Based on our oral checks for understanding, listening comprehension was poor; yet it became clear that setting this expectation, that we would be taking time to check for understanding, would take time away from the repeated-reading routine. In spite of this, the adhesive summary notes were better than usual, and the children seemed calmer and more focused. Although we were no longer previewing “difficult” vocabulary words, per se, we noted resistance from some children to underlining two unfamiliar words before Read 1; a common refrain was “but I know them all.” I noted in my journal that implicit in such comments might be the notion that it is not OK to not know a word and that, as teachers, we had perhaps not raised awareness of unfamiliar words in a positive, generative way. On the other hand, one table group asked us about three words, which felt like a small victory.

To redirect students who were rushing ahead to do the comprehension questions, we decided to publicly time each of the QuickReads® segments so that each group would start reading at the same time. We also instituted an entire minute of silence, pencils down, before Read 1, to enforce prereading. We told students they could “peek and think” at the comprehension questions that follow Read 3, but to delay writing until they had read the passage three times.

Many children came closer to accuracy with their Question 2 responses. There were lots of silver stars for comprehension but still few gold. Based on one student’s remark, we conjectured that some students might be thinking they have to respond in their own words rather than the words of the text. On April 1, I wrote, “maybe children think that they can’t parrot the words of the book and have to ‘say it in their own words,’ . . . . Something [student] said gave me this idea . . . when I gave her permission to quote the passage, she got both comprehension questions correct.” Paraphrasing is often emphasized in our regular literacy curriculum when children write responses to text. With preteaching of concepts and giving children explicit permission to quote, I felt I had made some breakthroughs in my own understanding of the comprehension dilemma that might have helped the children considerably with the QuickReads® passages, had we continued. Our 2-month struggle to figure out how our practices with the students were aiding or impeding their comprehension suggests the high degree of attention and reflection a teacher must give to students and their work to avoid unintended consequences of well-intended practices.

## **INSTRUCTIONAL DECISIONS: PERFORMANCE PRACTICE**

We expected Week 1 to be dedicated to establishing the QuickReads® procedure and did not plan any performance reading. During that week, the full routine was taking 25 to 30 minutes to complete, so we decided to delay performance practice for another week until the class could complete QuickReads® in the anticipated 15 minutes, allowing sufficient time for performance practice.

### **Week 2: Introduction**

Toward the end of this week, the class was still not completing the QuickReads® routine satisfactorily in 15 minutes, and we began to grow skeptical that this was realistic for our group and circumstances, with so many levels and groups to manage, as finally conceded on February 23 (above). We decided not to delay the performance-reading intervention any longer, as we expected it to be motivating for the students, and agreed to introduce it on the last day of the week, February 12, following the end of the first QuickReads® unit (five passages).

I constructed one-page scripts from QuickReads® passages the children had already read (Appendix H), plus a script from a Level B passage on the Bald Eagle as a symbol of America, to use as a model. I modified the passages by adding an introductory “hook” and, usually, a concluding attention-getter. I also found one or two significant lines within the script for everyone to read in unison. I blocked reader parts with brackets and lettered them, and underlined words to be emphasized. With the exception of Week 9, new scripts were prepared for each week. (In Week 6, I stopped underlining words for emphasis and instructed students to choose those words themselves.)

Bill and I modeled performance reading from the Bald Eagle script. The students were attentive during our modeling, less so during accompanying directions and explanations. The students were given about 15 minutes to practice their scripts. As we circulated among the groups, we held the students to correct pronunciation and pausing at punctuation, because the texts were familiar. Some students acted silly or wanted to sit down during practice. The whole class met briefly to share out our experiences. Some students expressed readiness to perform, although we had not observed any groups during practice that met our criteria for readiness, nor had we expected it! In his response to my notes for the day, Bill observed, “I noticed many students thought they were ready when they were not, seems as though they do not have an idea as to what fluent sounds like (makes sense).”

### **Week 3: Launching Practice**

The QuickReads® protocol for each passage was split over 2 days, to incorporate time for fluency mini-lessons and performance practice. Our first performance would be Friday, February 20, 1 week after we first introduced the practice scripts, and would follow three practice sessions.

During these sessions, we observed that students enjoyed practice but were quickly “done,” following two or three readings. I noted in my journal on February 17 that many wanted to sit or slouch against tables or walls or even lie on the rug, but we insisted they stand. Some group members squabbled over parts, although parts had been designed to be equivalent in length. If a squabble was not worked out quickly, we assigned parts. With six groups practicing, the room was loud. We observed students ignoring commas and the underlines that had been made for emphasis and had to reinforce the need to observe these

features, as we circulated among the groups. On February 19, my notes remark, “I am guessing that many of them don’t ‘hear’ the prosody of complex English sentences yet.”

### **Week 4: Turning Up the Volume**

Based on the first performance, we did a whole-class exercise to encourage reading with volume. Volunteers read a paragraph I had constructed about idioms and printed on a card, and projected their voice toward Bill, who stood toward the back of the room and rated them on a scale of 1 to 5. (“Idioms” was the focus of the school’s annual Literacy Week and they were being studied in the children’s classrooms.)

Each group received a new script, based on a previously practiced passage. To better manage the room during practice, we staggered movement of practice groups from the whole-class meeting area to the practice areas and had the students sit at the tables to practice until late Thursday, the day before the performance. One group petitioned to remain standing but broke their promise to stay in a confined area. We decided that the groups would work best if one of us acted as a room manager, circulating quickly, and the other as a facilitator of practice, and agreed to alternate these roles. As practice improved in following weeks, we were both able to act as facilitators.

To reinforce the ideas of natural phrasing provided by commas, dashes, and periods and of vocal emphasis (stress) on meaningful words, which we had modeled for our performance script, I introduced oral board exercises that could be done quickly. We used the paragraph about idioms, which reflected the school-wide emphasis on idioms prior to our annual Literacy Week, to practice pausing and word emphasis. Bill and I modeled, the class read chorally, first with verbalized PAUSE, then without verbalizing pauses, and finally



volunteers read. Words for emphasis, chosen by me, were underlined. We were surprised by the enthusiasm of the children. Virtually everyone wanted to volunteer, even younger students and students we would have expected to be shy. We extended the emphasis on vocally stressed words with the enlarged QuickReads® texts we'd used Week 1. I was able to introduce my own idiom, "running over a comma," as shorthand for failing to pause at a comma. We observed that word stress was quite a bit more difficult for the students than pausing.

My notes for Thursday, February 26 described practice as having gone "beautifully," with students serious and excited for the next day's chance to perform: "Students and we are energized and excited by performance possibilities; we think of many ideas to enhance performance and practice but don't want to overwhelm students by introducing too much too fast." Some of those possibilities including having students observe the narrator of a TV documentary, having English-only students make a mock documentary to use as a peer model, teaching gesturing, recording the students' performances (audio or video), checking comprehension of the audience, and inviting outside audience members to the performances. Over the following weeks, we incorporated several of these ideas.

### **Week 5: Emphasizing Emphasis**

I spent some time trying to locate an appropriate TV or video narration, one that would be comprehensible to the students without requiring we fill in a lot of background knowledge and that showed the narrator visually, as well as hearing him, at least part of the time. I had a recent memory of such a narrator for a documentary on Abraham Lincoln, but wasn't able to locate it or any other I deemed suitable. Narrators were invariably off screen

for all but the briefest moments and simple content was not as readily available as I had imagined. I decided the search was not worth the time I was spending on it but continued to hope that something appropriate would emerge. I considered this one disadvantage of having wide age and grade diversity. Had students been at one grade level, it might have been easier to locate suitable video content.

We doubled the length of the scripts this week. During practice, we observed that students frequently emphasized words in an unnatural way. On March 4, I noted in my journal that some shouted on the words I had underlined for them to emphasize. Bill agreed and added that the students appeared to be trying but not understanding why we emphasize certain words over others. Some students were noticeably jazzed about performance practice, particularly one of the sixth-grade girls who had not cooperated the first week and had been offered the choice to leave the class at that time; we had to redirect participation at other tables. I was anxious to introduce gestures but Bill cautioned restraint, to stick with vocal emphasis for now. He ended his response on March 4 with this reflection:

I have a feeling that the emphasis is huge. And very difficult for students to do correctly, although there has been a great improvement. I do wonder if they know why they are emphasizing words. Most likely because they are underlined. Perhaps we could look into having groups underline words they should emphasize and why . . . I would continue emphasis before gestures.

### **Week 6: Beginning Gestures**

We returned to one-page scripts, as the two-page scripts had been too long for our scheduled performance time. This was a function of having many groups and taking time for audience comprehension checks and feedback to the performers.

I argued that adding gestures might complement verbal emphasis in a meaningful way, because both bring attention to words that carry key meanings. These words can be emphasized with gestures or with voice or both. Bill responded that “it might be a push, but I think they are ready for the next step. I think the addition of gestures will help them to figure out what words to emphasize.” Using the Bald Eagle script, Bill and I modeled, for the whole class, how to use gestures to emphasize meaningful words and ideas; students shared back what they’d seen and heard. Although I had previously determined which words for students to emphasize vocally, by underlining them in the scripts, at Bill’s suggestion (above) we now asked the students to decide which meaningful words to emphasize vocally and/or to gesture; I stopped underlining words. We had volunteers make up gestures for the idioms passage we had used for volume and emphasis practice. We also coached students during practice.

During this week, we facilitated additional oral practice with pausing and word emphasis, from a second paragraph on idioms; this was directed at performance but we hoped that there would be transfer into silent reading as well.

My notes for March 10 report a “healthy buzz” of activity and learning during this practice, and Bill agreed that the students were “excited and receptive . . . [and] involved.” We accurately anticipated several challenges the students might have with gestures and were able to be proactive. It was clear that performance practice was far more engaging for the children than the QuickReads® routine, so Bill and I considered radically restructuring the latter to treat the entire unit as a script and integrate performance practice with the questions. In the end, however, we decided such restructuring would probably be confusing to the students, and we kept the two routines separate. During Weeks 10-12 (below), which were

not formally part of our study, we did in fact create much longer scripts from single QuickReads® units, and we read the scripts with the students for comprehension, prior to practice and video-recording. Our informal observations of that time were that students took their performances more seriously when they saw and heard themselves.

### **Week 7: Deconstructing Emphasis**

We had told the children, in a general way, to choose meaningful words to emphasize with voice or gesture, but reading comprehension continued to be a challenge for our students, and so it was not surprising that the use of gesture often missed the mark. Bill and I decided to deconstruct how we, as mature readers and native speakers of English, choose which words to emphasize vocally, with the idea that we might discover generalizations to pass on to the children. We took an unfamiliar passage and, independently of each other, underlined words for emphasis. When we compared them, we had chosen about the same number of words, of which 67% were the same. We were not sure whether to interpret this as a good match or a poor one. I noted that in repeated oral reading of a storybook, I myself do not necessarily emphasize the exact same set of words the same way each time. We did not seriously disagree with each other's alternate choices for emphasis, but our discussion did not generate a useful subset of understandings that we could pass on to the children, with the exception that we usually emphasized the negation “not” as well as extremes such as “never” and “always.”

We noted during practice this week that some students attempted too many gestures, some paused to gesture after speaking the target word(s) instead of gesturing while speaking, and most gestured too quickly. Vocal emphasis continued to be difficult for the children and

sounded unnatural for many. As we circulated during practice, we modeled many lines for students and had them repeat after us. I noted in my journal that “it seems hard for them to *coordinate* all the things they’re still having to think about: gestures, vocal emphasis, pacing (pausing), and volume.” Bill noted several students were shy about gesturing even during practice.

### **Week 8: Emphasizing Main Idea**

The class had met their first audience-comprehension goal during performance (detailed in the next section). Bill and I felt encouraged and continued with our emphasis on emphasis. To underscore the importance of comprehension we decided to go with a general “main idea” anchor to help the children choose which words to emphasize. As a whole class, we modeled and then had students practice on passages we had displayed, excerpted from this week’s scripts. We asked the students to reflect on which words show the main idea of the sentence and favor these for emphasis. Many were eager to try on the whole-class exercises publicly, but fewer than with the pausing exercises several weeks back. We released groups to apply this to their own scripts. Many had picked up that I consistently emphasize *not*. Some students still tended to yell emphasized words. One sixth-grade boy, in particular, continued to confuse emphasis with enthusiasm, and was resistant to constructive critique.

Bill and I continued to coach pausing, word emphasis, gestures, and fill in absentee parts during practice time. (At other times, we asked a group member to fill in, taking two parts for the day.) As students worked to approximate meaningful emphases, some readings sounded more awkward and unnatural than ever. In my notes of March 26, I commented,

“The students want to make the easy gesture, rather than the most meaningful gesture.” For example, in a sentence stating that the job of an astronaut “sounds like fun” to many children, one student cupped his ear and vocally emphasized the word *sounds* rather than the more abstract word *fun* that carries the meaning (and might be gestured by throwing the arms up overhead with enthusiasm). In their attempts to gesture, some students could have been described as gesticulating or overacting and “I reminded Bill to speak with [student] about the difference between enthusiasm and emphasis.”

### **Week 9: Script Holdover for Improvement**

We decided to see if we could get better performances if the children continued with last week’s scripts to improve on them. There was no new instruction or modeling. This was the final week of instruction before spring recess. Under the circumstances, extending practice did not pay off in better performances for most of the groups, but did for two of them. My notes of April 3 express that “performances, overall, were a disappointment. Many [groups] sounded as if they had not practiced much and, for the most part, there were not significant improvements to last week’s performance of the same script—some actually declined. I did see significant improvements in the two ‘C’ groups.”

### **Weeks 10-12: Video Performances**

The formal part of our study ended Week 9 with posttesting for oral reading fluency with comprehension. However, Bill and I decided to continue with the class for an additional 3 weeks, following the 4-week recess and prior to commencement of state testing.

During the recess, I practiced making and editing iBook® videos, with which I was unfamiliar. We made a demonstration video to show to the students. The first week back,

Week 10, Bill and the fourth, fifth, and sixth graders were away for week-long, off-site learning experiences, so I had a unique opportunity to begin small, with the five third graders in our class. I created a longer script about Early Humans composed of three unfamiliar passages from one Level B QuickReads® unit. Our goal was to create a credible reading-performance video to show the entire class the following Monday. We read the script together for understanding, then practiced the script, and, at the end of 2 days' practice, recorded the first video.

The video was eye opening for the students, who saw and heard themselves for the first time. They saw how gestures needed to be made slowly and deliberately, in clear view, how eye contact and posture affected delivery and understanding. One girl had not been able to stand still during reading, twisting her legs and bending, and seeing this had a corrective effect. The students practiced more soberly and improved for the second recording, made on the fifth day. I was able to do enough editing and subtitling to make the video audience worthy.

We showed the third graders' video along with our demonstration video to the class on Monday of Week 11 and then repeated the process with all the students. The third graders continued practicing their Early Humans script, which needed polishing. Toward the end of the week, I set up a "studio" in another room, and groups were called in one at a time to be recorded.

Once again, the results were eye opening for the students. Generally, they responded seriously, and used what they saw to improve. We recorded again toward the end of Week 12, but when we convened to show the final results, we had some technical problems and not all the final performances could be shown.

An e-mail to Bill on a day he missed, May 20, details a lesson in which I had organized words from the students' scripts into four categories on the board, Gestures with Hand, Gestures with Body, Gesture with Head, and Use Your Voice, and had volunteers act them out in front of the group. This single day of notes for this time period observed that students took on Use Your Voice examples "rather well." I noted, "There was a lot of silliness with the gestures . . . but they got the point, I believe, about slow and big gestures." I also worked that day with select students on their phrasing, utilizing echo reading.

Bill and I found that video recordings were highly motivating for our students, and we thought they showed great potential as a tool to be used with performance reading. I thought that using the extended scripts made the presentations fuller and more satisfying. However, we had collected no further data, including any detailed notes (with the one exception above), and the hard drive containing the videos crashed before this narrative was written, so we have only our own fading impressions of these brief weeks to report.

### **INSTRUCTIONAL DECISIONS: READING PERFORMANCE**

Actual reading performance both reflected and informed reading practice and took on significance of its own as we were challenged to teach audience behaviors in a natural, meaningful way. For this reason, it is presented as a separate narrative. Here, "performance" actually refers to multiple performances by seven groups of two to four students each. For the most part, these groups remained fixed, but there were slight adjustments to some groups to accommodate new students in the class and, in two cases, clashing temperaments. The first performance was at the end of Week 3.



### **Week 3: Eager but Quiet**

By Week 3, the regular classroom teachers had agreed to allow us an additional half-hour a week for performance, right before dismissal time on the students' short day, Friday. For the first performance, we set the room up theater style, placing chairs in curved rows with an aisle up the center. We pulled down the large media screen, to form a backdrop.

None of the students resisted performance; most were eager to volunteer. I was so surprised by this that, in my notes of February 20, I mused that I was seeing an "American Idol" phenomenon. Nevertheless, most performers read in quiet, "mumbling mouse" voices, without projecting. Two sixth-grade boys in a dyad apparently could not decide which part each was responsible for and forfeited their opportunity to perform, deeply disappointed.

Immediately following a performance, while the group was still standing, Bill and I offered specific praise about clarity, volume, pace, pausing, or emphasis, followed by one or two things for individuals or the group to work on for the next performance. Overall, the audience appeared to be listening to the performances but not engaged in (reacting to) the content. This was understandable given the general lack of audibly comprehensible reading. Bill was upbeat and, thinking ahead, suggested multiple enhancements including student self-evaluations or written goals, video-recording, a quick comprehension check for the audience, and inviting extra audience members to inspire the students. Over time, we implemented all of these suggestions, except the first, though not necessarily in the order that would have been most generative for the students. In particular, I think we could have video-recorded the students much earlier, as previously noted.

### **Week 4: Volume Up; Listening Down**

My notes of February 26 declare that students read much better than the previous week, more clearly and with greater volume, but frequent stopping for audience behavior was a strain. Bill was out sick, and I gave brief feedback to the groups, on pausing, emphasis, and volume, rating each informally from 1 to 5, and occasionally used specific praise of individual efforts. However, during performances, I waited a lot for the audience to pull together respectful audience behaviors and the class was unable to complete all the performances in 30 minutes. Nevertheless, one boy who generally has difficulty with social relationships made a point of announcing, “That was fun!” To a certain degree, the audience’s lack of engagement was understandable, as the children were not yet skilled at delivery. However, we could not allow this to be an excuse for poor audience behaviors, which, I reflected, “seems quite unconscious.” Bill and I considered presenting an explicit list of audience behaviors to be observed. Upon further reflection, we decided to use a more natural approach, by challenging the audience to listen for new information.

### **Week 5: Challenging Audience Comprehension**

Rather than address poor audience behaviors directly, by discussing and charting positive behaviors, we decided to introduce a comprehension challenge for the audience. We reasoned that defining a purpose for listening should be as or more effective than proscribing audience behaviors and serve to underscore our emphasis on comprehension. We explained to the students that, if the purpose of performing informational text was to have the audience learn the information, then listening for new information and speaking it back was a measure of how well the group had performed. Following each performance, we would assign one

point for each fact or concept an audience member was able to remember and repeat or paraphrase accurately. A goal of 15 points for the class was set.

The class scored only five points Week 5, but audience behavior was greatly improved, except for the crinkling of scripts audience members were holding. To my notes of March 6, Bill responded, "I think the audience comprehension is a great idea! We may have spent too much time when they had no responses, hence not everyone was able to perform. The flip side is that the audience focus is really important, and we need to get them to respond." My own notes state that the performers sounded much better than the previous week, read with greater volume and stood straighter, scoring 3.5 to 4 on our 1-to-5 informal feedback scale. Some of the students who had been racing their lines the previous week(s) slowed down. Many continued to emphasize the underlined words in an unnatural manner. Without bringing explicit attention to them, we modeled eye contact and gestures as we filled in for absent performers. It was no surprise that the information Bill and I read, as substitutes for absentees, was the information that the audience remembered best; as mature readers used to speaking to groups, we spoke clearly, projecting our voices, and utilized pausing, word emphases, gestures, and eye contact in a natural way that reflected our understanding of the content.

### **Week 6: Where Did the Gestures Go?**

We were granted an additional 10 minutes for the Friday performances, so we now had 40 minutes. This week we had groups sit together in the audience, and we passed out and collected scripts at the time of each group's performance, to eliminate crinkling scripts in the audience. We started with the groups who had not had a chance to perform the week

before. Unanticipated, the sixth graders were pulled away from science-exhibit rotations to come to our class, and they protested angrily; one refused to perform. Nevertheless, the children were much more attentive to the performances due to the goal we had set (15 points), though still far from a perfect audience. In particular, it seemed hard for the younger students to keep up with the older kids and with the concepts in the more advanced scripts. The surprise was that most groups did not use the gestures they had practiced so well, or very few of them. One third-grade boy had looked and sounded quite “TV-commentator professional” during practice, but his gestures fell apart in performance. The enthusiasm to be seen and heard which we thought we were observing in most of the children did not eliminate self-consciousness. Under pressure, the students were not yet synthesizing all the things we were asking them to pay attention to in practice.

### **Week 7: Meeting the Audience-Comprehension Goal**

This week we gave the students “think time” to recall their gestures right before their performance. Mrs. Mahan, our principal, was our first invited guest. My notes of March 20 reflect that the performers made better use of practiced gestures than the previous week, but there was still much room for improvement. Audience comprehension significantly increased, and the goal of 15 points was surpassed with 24 and celebrated. I made deliberate attempts to get audience members to listen to each other and add on. Nevertheless, some inappropriate audience behaviors had to be stopped directly. Mrs. Mahan commented positively but realistically on the performances: “I can see you’ve been working on some things, and there are still some things you need to work on.” She shared an anecdote related to one of the performance pieces that amused the children. Bill continued to give some

constructive feedback to individual performers, although our interactions with the audience dominated.

### **Week 8: SLANT; Up the Ante**

During whole-class time earlier in the week, we introduced a classroom management technique known as SLANT (Ellis, 1991) to help with listening behaviors. This version of SLANT stands for: Sit up, Lean forward, Activate your thinking, Note key information, Track the speaker. In particular, we had the students practice tracking the speaker during whole-class time. We noted with a mix of frustration and amusement that students were more willing to track each other than either of us, but agreed that it provided a more efficient and neutral way of signaling for productive behaviors.

For our performance, we set a new goal of 30 for audience comprehension and invited our second guest, sixth-grade teacher Mr. Magallanes. I noted on March 27, “It went about as well as last time. The kids are trying, and approximating, the reading behaviors we have emphasized and the goal really does help the audience behaviors.” They were making more gestures, but these still needed work, as many were made too quickly and some were not made on a particularly meaningful word. With the number of reading challenges increased, students were forgetting to read with volume and others were “hiding” behind their scripts.

Again, we worked at getting the audience to listen to each other and add on to comments. I noted that “they don’t seem used to it,” a comment perhaps on classroom and school culture that went against my own grain as a teacher (see School and Classroom Factors, below). I noted that when groups were not asked to sit together, but directed to sit in rows by grade, girls sat on one side and did not contribute voluntarily. Bill and I considered

setting up a boys-versus-girls goal for the following week to see if we could engage more of the girls in the audience.

Visiting audience member Mr. Magallanes volunteered that he saw “some improvement” in his kids, but Bill and I wondered if he was being polite. Three of his five students were in one group; they read clearly but missed gestures and did not get accurate comprehension feedback from the audience.

### **Week 9: Does Protracted Practice Improve Performance?**

We had decided to see if we could get better performances if the children continued with last week’s scripts to improve on them. There had been no new instruction or modeling during the week. The final performance was on April 3, the day students were dismissed for the spring recess.

Mrs. Allen, a third-grade teacher who was teaching the Intermediate ELD group prior to the study, was our third invited guest. The students were asked to read and review their performances mentally for a few minutes; then we collected the scripts for the performances. The comprehension goal was kept at 30 points, with boys’ and girls’ contributions shown separately in an effort to motivate the girls. Mrs. Allen expressed genuine pleasure with the progress of her third graders, which, my notes recall, rather surprised me. I noted that the sixth-grade boy who was characteristically deaf to critique was gesticulating wildly rather than gesturing. Bill and I reflected in our exchange that perhaps it was time for the kids to see and hear themselves on video, with which we experimented following the break (see Performance Practice, Weeks 10-12, above).

We saw poor audience behavior, especially from sixth graders; bodies, in particular, were restless; one third-grade student (not a study participant) was offered a choice and sent back to his regular classroom. Everyone sat up when cued to SLANT, but audience members were not listening well to each other, as four or five times information was repeated by the very next speaker; I prompted to “track the speaker,” but sometimes students sharing out had to be stopped until others were listening.

For four of the seven groups, performances did not improve over the previous week’s performance with the same script, and some actually declined. Some groups sounded like they had not practiced. However, two of the seven groups did show significant improvements, and two others made significant improvements in volume. This showed us that there are trade-offs to extending practice time for familiar scripts. Some students clearly had used the time to improve, while the interest of others evidently had waned, producing less effective readings. We wondered how much the wandering attention of both performers and audience was affected by anticipation of their dismissal for the 4-week break, immediately following the performances. In addition, sixth graders expressed hostility for missing a classroom party and, though they settled down, this likely affected their performances and audience behavior. Showing boy and girl comprehension points definitely encouraged participation from girls, who volunteered responses to the comprehension challenge more than in previous weeks. However, overall points exceeded the previous week’s by one, five shy of the new goal of 30.

In my final notes I reflect how obvious it was to us that the clear and powerful performances resulted in better audience learning; factoids from Bill’s and my substitute

performances continued to emerge from the audience first, but accurate information was certainly not limited to our performances.

### **INTERVENTION DECISIONS: WEEKLY MONITORING**

Each week, I met with three to five students individually each morning for several minutes to assess them on oral reading of similar, but unfamiliar, QuickReads® passages. There are three QuickReads® books of 30 passages for each of six instructional levels, A to F. Initially, I expected students would use Books 1 and 2 for classroom reading, covering four passages a week, and I planned to use Book 3 for weekly assessment. I had decided to use a passage at the student's instructional level (A–F) but from the third book, presumed to be slightly more challenging, to avoid ceiling effects. In other words, I reasoned that a slightly longer, somewhat more difficult passage within the same level would be most likely to demonstrate gradual growth over the 8 weeks with less likelihood of the student reaching a ceiling rate early (reading all the words in the passage correctly in 1 minute).

#### **Week 1: Questioning Instructional Placements**

I had each student read two passages from their Book 3, a science passage and a social studies passage. I made two generalized observations of note. First, most students read words with accuracy well below 90% on both passages, which is typically considered frustration level for a text. This was in marked contrast to their instructional-level accuracy on the placement QuickReads® passages done 6 weeks earlier, before the winter recess. Second, passages with proper nouns, like many of the social studies passages, were read by most of the students with lower accuracy than passages with few or no proper nouns. The placement passages had not included proper nouns. Based on the scoring of the GORT



pretest, and the number of times I had to review those recordings, in many cases, to pick up all the miscues (see Chapter 5 discussion), I considered that I may have understated miscues and therefore overstated rates for the placement passages. I decided I would wait until the second week of CBM assessments and then move students who continued to demonstrate frustration-level accuracy down a level. Furthermore, I would use a passage toward the end of Book 1 rather than from Book 3.

As a caveat, it is important to note that I was using the GORT scoring system for the CBM passages. In this system, repeated words or phrases, including repeats to self-correct, are counted as miscues, whereas they are not in most other systems for evaluating oral reading. Students who repeat a lot would have depressed rates not necessarily reflecting their decoding ability. Decoding words correctly but repeating phrases, for instance, might not impact recall and comprehension in the same manner as substitutions or other types of miscuing. Therefore, I evaluated the students' responses to comprehension questions in the QuickReads® books, as a cross check for the need to move them down a level. I did not formally analyze the "acceptability" of miscues at this time, a procedure based on the idea that some miscues do not alter the text's meaning and are not considered a detriment to comprehension. The miscue analyzes I made after the intervention, for all the pre- and postintervention GORT readings, indicate that the children as a group made few meaning-preserving substitutions (see Reading Achievement: Gray Oral Reading Test: Changes in Miscue Patterns).

One of my practices as a reading clinician has been to use informal-inventory assessments as simultaneous opportunities for learning. My notes of February 3 include,

With some of the students I used the baseline recording [session] time to make one suggestion s/he could think about. For instance, [student] consistently doesn't pay attention to plural endings, sometimes even changes the subsequent verb to match the number he read, rather than the verb as printed. I pointed this out to him and asked him to start paying attention to it.

I had not anticipated doing this when I planned the research but found it to be so ingrained in me that it was actually a challenge to hold back. As I could spend only a few minutes with each child, these instructional exchanges had to be focused and brief. In the first week, I had three students start noticing "key words," words that were contained in the title, caption, and repeated in the text. This was a support for the text preview exercise before Read 1 of the QuickReads® routine. As the weeks went on, I addressed prereading comprehension strategies with all students and the decoding needs of particular students.

## **Week 2: Changing Instructional Levels**

During CBM sessions, I told students to practice what we were learning in class, to think and look for key words before reading, for which they were given "think time," and to pause at punctuation marks during reading.

At the end of this week, I made the decision, as discussed above, to move eight students down a level, and one student down two levels, in the QuickReads® curriculum. One sixth-grade girl qualified but, based on her initial resistance to being grouped with younger students, I did not move her down as I thought this would be detrimental to her self-concept and willingness to participate in a positive way. Other candidates, all third graders, were already at the lowest level, A, and could not be moved down. The changes would take effect for Unit 2, beginning Week 3.

### **Week 3: Getting the Procedures Down**

The change in instructional levels and groupings for QuickReads®, as well as the decision to begin performance reading, was disruptive to the class schedule we had established. At the end of Week 2, too many students had shown confusion about the QuickReads® protocol (Figure 1), particularly how to use the workbook sections effectively. I skipped CBM readings Week 3, called in students who worked together at a table, two or three at a time, and reviewed the steps with them, checking for understanding. We spent most of these sessions, about 10 minutes, on when and how to complete the workbook organizer and questions.

### **Week 4: Back to CBM Readings**

I resumed the CBM readings but, beyond the data I collected for individual students, my research notes do not record any reflections on CBM monitoring for this week.

### **Week 5: Change in Target Passages**

Since we had settled into reading two QuickReads® passages a week, I decided to use the fifth passage of each unit for CBM readings and not in class. I would use the last passage in the current unit 1 week, alternating with the first passage of the next unit the following week. This would have the advantage that the CBM passage would not get ahead of the current instructional level. The disadvantage would be that, for final passages of a unit, the topic would be familiar and some topic-specific words would have been learned in the preceding passages in the unit, compared with the initial passage, for which the topic and key content words were more likely to be unfamiliar. If this were true, I might expect to see the rates fluctuate up and down rather than show a steady increase. Using the

controlled-vocabulary texts, there did not seem to be a way to resolve this dilemma. Either I accelerated the level of the passages, or I introduced this unevenness in familiarity. I felt my decision was justified because parameters for CBM texts are not well defined in the literature and are left to the discretion of the teacher. In fact, Hiebert (2002b) has demonstrated that grade-level basal texts (curriculum from which one might be expected to draw for CBM) do not show uniform progression in word features associated with text difficulty.

### **Week 6: More Than CBM**

On March 10, I noted, “The private sessions are more and more becoming a time when I can connect with individual kids about their word attack, comprehension, and phrasing strategies.” Curriculum Based Measurement sessions were turning into 10-minute conferences. I was placing a lot of emphasis on prereading comprehension, watching to see if the students were cross-checking the passage title, unit title, picture and caption. Most were still doing it superficially, grasping onto something from the title or picture or caption to predict what they would learn, without doing the cross-checking. During this week, I also started checking for postreading comprehension, posing “What did you learn from the passage?” For three of the students, I used a few minutes of their individual session to address table squabbling and how to handle it. Overall, I was seeing a lack of word-attack strategies for long words and began practicing this briefly with select children. Bill and I continued to refine instruction based both on the behaviors of the students during class and my observations of their reading during CBM sessions.

### **Weeks 7-8: Individual Coaching**

Despite the brevity of these sessions, I was connecting more and more with individual kids about their reading strategies. I introduced phrase-cued text (Rasinski, 1994) with one student. Beyond the prereading focus, which I used with all, I zeroed in on one or two things for each student to pay attention to during reading. For the younger students, this tended toward noticing affixes by “reading all the way through a word” or a specific within-word vowel pattern. For older students, this tended toward noticing long-word chunks, cross-checking decoded words with known oral vocabulary and asking whether a sentence makes sense. Although those interactions were brief, allowing for minimal practice, I felt compelled to continue them. Having watched students slow down their reading weeks before, as they paused for punctuation, I was not seeing rates come back up as I expected. The other behaviors I had asked individual students to pay attention to might be accounting for the continued slow down. On the other hand, I was observing more children using the prereading strategies effectively, with less prompting. My reflection on March 12 includes,

I am encouraged by the work in the assessment sessions, though I think it will take many more weeks to see the speed up in reading rate that I would now like to see, as decoding and phrasing habits are redressed. I am seeing the transfer of the prereading comprehension strategies into the weekly reads, but certain students are not taking the time to think before First Read in class.

I wanted to see reading rates come up but not at the expense of comprehension. This entry belies a personal bias for individual (or small-group) instruction and hints at my frustrations with whole-class instruction. A remark I e-mailed to Bill on May 20 further reflects on this tension: “If I could have every one of these kids for 10 minutes, I bet I could make a huge impact on their performance. But I am reluctant to use my authority this way because it isn’t something replicable by a classroom teacher.” Possible effects of manipulating additional

learning variables through such individualized instruction, though it was brief, are discussed in Chapter 5.

### **Week 9: Posttesting**

Each student did one additional CBM reading at the time I posttested him with GORT, but this was for rate and accuracy only and coaching was omitted.

### **INTERVENTION: SCHOOL AND CLASSROOM FACTORS**

Observations related to school and classroom culture that did not directly bear on QuickReads® or reading-performance instruction, are organized into three themes indirectly related to the success of the intervention.

#### **Age Diversity**

One concern we had throughout the study was the wisdom of placing third through sixth graders in the same classroom for the intervention. The third, fourth, and fifth graders had participated together as an intact ELD class prior to the intervention, but the six sixth graders, and one third grader from an Early-Intermediate ELD class, were additions. This was compounded by sixth grade having a different lunch schedule, which our start and stop times interfered with. During the first weeks, sixth graders behaved in a way to consciously set themselves apart from the other students. We appealed to them as role models, while, in private, we considered dropping them to preserve the integrity of the class. By the end of the first 2 weeks, they had settled in and functioned within our expectations most of the time. One sixth-grade teacher was instrumental in assisting us with the continued cooperation of his five students. We e-mailed him a report of their behaviors almost every day, and the

students expected and received repercussions if their behaviors were off-task or negative. We were careful to praise these students when they had met our expectations. Toward the end, comments by some sixth graders suggested that they were eager to be done with the class. Had I to choose again, I would not mix four grades in one classroom for reading instruction.

Sixth graders were placed into the QuickReads® curriculum according to their assessed reading level, rather than by age, and this created drama for one girl, a special-education student mainstreamed in a regular classroom. Although she had agreed to be in the study, she chafed at being placed “with little kids” in a Level C group and was publicly resistant to participation during the first few days. I coached her in private and we came to an agreement that she would try the class in earnest for 1 week and then be allowed to return to her regular classroom if she wanted. I pointed out to her that another sixth-grade boy was in the other Level C group, but she did not relate to him as an equal as he was from a self-contained special-education classroom. This girl ended up enjoying and prospering in the class. I would have placed her even lower in the QuickReads® curriculum, during the re-organization of Week 3, but was reluctant to lose her and did not make that change.

### **Study Inclusion**

Another concern was mixing students who were part of the study with those who were not. Twenty-eight children participated in the class, while 18 participated in the study (one left the school before final data were collected). Students enrolled in the study met with me weekly for assessment, thereby receiving positive attention and a modicum of individual reading support outside of the class. Most of the students who did not participate in the study

had not met the narrow criteria for inclusion and had not been invited; two joined our class midway through the study, replacing two who left. We avoided making references to the assessments and tried to treat all students equally during our time in the classroom. Two boys who were not part of the study showed mild to moderately uncooperative behaviors most of the time. Usually their negative behaviors could be ignored but, occasionally, one of the boys was returned to his regular classroom for the day after being offered a choice. Both boys could be behavior challenges in their regular classrooms, but had not noticeably chafed under the previous ELD instruction. One had significant life issues originating within his family that we were aware of. The other boy left the school halfway through the study. Most students who were in the class but not in the study were highly cooperative, but we wondered if some degree of rapport set up by inclusion in the study, with personal attention during weekly monitoring, would have made a difference for those who were not. Our notes reflect that we spent a disproportionate amount of time redirecting and helping a few students not enrolled in the study.

### **School Culture**

The Stage One thick description of the school environment (Appendix C) reflects a school culture lacking in adult agreement on how discipline should be taught and reflected in specific student behaviors. Although many classrooms were places of order and discipline, others were not, and behaviors in common areas, particularly during transitions, were of increasing concern to staff, students, and parents. This lack of consensus was reflected, for us, in the challenge of students getting to class and ready for instruction in an orderly, timely



way. Sixth graders, in particular, outside of their normal lunch schedule, were inconsistent in getting to class on time and contributing to a smooth start.

Another way this lack of adult consensus and practice may have manifested itself was in an obvious lack of listening and sharing behaviors consistent with an academic learning community. At the start, students did not seem to expect to have to listen to us or to others even briefly and did not seem to know how to discuss cooperatively in a class or table group, although it had been my assumption, as a long-time resource teacher at the school, that “accountable talk” was generally practiced. Yet, in many other ways the students were compliant and eager to please us. This suggested to me that they were not resistant to community learning behaviors such as formalized talk, but did not regularly have these behaviors expected and reinforced in their classrooms. Nevertheless, it was sometimes an effort to stay welcoming and positive while maintaining my own strict expectations inside the classroom.

A “no putdown zone” was declared and discussed on the first day, and putdowns were immediately addressed in a constructive way whenever they were seen or heard. Nevertheless, there was an undercurrent of squabbling at times among group members, particularly in rivalry over tasks and roles, and we had to downplay individual competition and promote class goals to counter it, as well as do active problem solving with individuals and groups in private.

Although midway through the study, Bill tried to assuage me with the observation that negative student behaviors were “a collective failure” of the school, the influence of school-wide expectations and culture has become clearer in retrospect. Following the study, in June and July, the school implemented the first stage of a collectively created student-behavior

program. The impressive results of this program, seeded in summer and tended in earnest the following fall, in promoting positive student behaviors made it fairly plain that collective adult will significantly defines a school culture and may have impacted the classroom culture for our study to some extent.

### **READING ACHIEVEMENT: OVERVIEW**

Reading achievement is presented in six sections. The first three sections present quantitative and qualitative data for student reading achievement, measured in three ways.

1. Gray Oral Reading Test (GORT)  
This section presents data and an analysis of changes from the pre- and posttests of the GORT-4 and accompanying miscue analyses.
2. Multidimensional Fluency Rubric (MFR)  
This section presents data and an analysis of changes from pre- and postratings of GORT oral readings made by two independent raters.
3. Curriculum Based Measurement (CBM)

This section presents results of oral reading charted weekly for each student.

Two sections report other observations that may have affected the quantitative results. The last section summarizes five learning trends from the data.

4. Competing Instruction  
This section presents data for six students who, unbeknownst to the researcher, were simultaneously enrolled in a computer-based English language program that included a reading component.
5. Testing Environment  
This section reports on the consistency of the testing environment and the posttesting experience of one student.
6. Trends in Student Learning  
This section summarizes five trends in the development of oral text-reading fluency for the students in the study, as suggested by the data in the previous sections.

## **READING ACHIEVEMENT: GRAY-ORAL READING TEST**

The Gray Oral Reading Test provides five norm-referenced measures for oral reading of short text passages: Rate, Accuracy, Fluency (a combination score), Comprehension, and Overall Reading Ability (a combination score). Form A, administered during the week preceding the intervention, served as a pretest and Form B, administered during the ninth week of the intervention, as a posttest. The Gray Oral Reading Test also provides a system for analyzing miscues; the results of these analyzes, along with anecdotal reporting of prosodic changes observed during GORT evaluation, are also presented below.

Data for GORT Rate, Accuracy, Fluency, and Comprehension measurements are shown in Tables 3 and 4. These four terms, when they apply to GORT-4 scores, are capitalized in all discussions below and in Chapter 5, to set them apart from the same terms used generically and to simplify reading. The data reflect standard scores and percentile changes computed against the publisher's normed sample, ages 6 to 18. Changes in Age Equivalency are also shown, to give further context for interpretation, although the publishers of GORT-4 caution against using them to make statistical inferences (Wiederholt & Bryant, 2001). Means and standard deviations for changes in standard scores were calculated using the Microsoft Excel® functions. Standard deviations consider the 17 study participants as a unique population rather than a sample because participants were selected purposively, not randomly, and represent most of the students at the study site who met the study criteria.

### **GORT-4 Changes in Oral Reading Rate**

Nine of the 17 students in the study (53%) demonstrated a decrease in oral reading Rate over 9 weeks, while 4 showed no change in Rate and 4 showed an increase in Rate.

**Table 3. Individual Pretest to Posttest Changes for GORT-4 Rate and Accuracy**

Student	Grade	GORT-4 Rate			GORT-4 Accuracy		
		Change SS	Change percentile	Change AE	Change SS	Change percentile	Change AE
1	6	-1	-4	0.0	0	0	0.0
2	6	<b>1</b>	<b>&lt;1.0</b>	<b>1.3</b>	<b>3</b>	<b>14</b>	<b>1.1</b>
3	6	-1	-9	-1.3	<b>1</b>	7	-0.3
4	6	-2	-14	-1.6	<b>1</b>	<b>16</b>	<b>0.6</b>
5	6	0	0	<b>0.1</b>	<b>3</b>	<b>20</b>	<b>2.0</b>
6	6	-1	-7	-0.3	<b>1</b>	<b>&lt;1.0</b>	<b>0.6</b>
7	5	0	0	<b>0.1</b>	0	0	<b>0.0</b>
8	5	<b>2</b>	<b>16</b>	<b>1.0</b>	<b>1</b>	<b>3</b>	<b>0.7</b>
9	4	<b>2</b>	<b>25</b>	<b>0.7</b>	<b>2</b>	<b>7</b>	<b>1.0</b>
10	4	-4	-50	-2.3	<b>1</b>	<b>4</b>	<b>0.9</b>
11	4	-2	-25	-1.0	<b>1</b>	<b>13</b>	<b>0.4</b>
12	3	0	0	<b>0.9</b>	<b>1</b>	<b>12</b>	<b>1.0</b>
13	3	-1	<b>4</b>	-0.3	<b>1</b>	<b>7</b>	<b>0.3</b>
14	3	<b>1</b>	<b>3</b>	<b>0.9</b>	<b>0</b>	0	-0.7
15	3	0	0	<b>&lt;1.0</b>	-1	-3	<b>&lt;1.0</b>
16	3	-5	-35	-1.0	-1	-7	<b>0.3</b>
17	3	-2	-7	-0.4	-1	-4	<b>0.0</b>
<b>Sum</b>		-13	<b>Sum</b>		13		
<b>Mean</b>		-0.76	<b>Mean</b>		<b>0.76</b>		
<b>Std. Dev.</b>		1.83	<b>Std. Dev.</b>		1.16		

*Note.* SS = standard scores; AE = age equivalent (in years). Positive value changes are highlighted in boldface.

**Table 4. Individual Pretest to Posttest Changes for GORT-4 Fluency and Comprehension**

Student	Grade	GORT-4 Rate			GORT-4 Accuracy		
		Change SS	Change percentile	Change AE	Change SS	Change percentile	Change AE
1	6	-1	-1	-0.1	-2	-26	-0.0
2	6	<b>1</b>	<b>0</b>	<b>1.0</b>	<b>1</b>	<b>7</b>	<b>1.0</b>
3	6	<b>0</b>	<b>0</b>	-0.3	-4	-47	-4.3
4	6	-1	-1	-0.3	<b>1</b>	<b>4</b>	<b>0.4</b>
5	6	<b>2</b>	<b>7</b>	<b>1.0</b>	<b>2</b>	<b>7</b>	<b>2.0</b>
6	6	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>8</b>	<b>73</b>	<b>5.1</b>
7	5	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>1</b>	<b>9</b>	<b>1.0</b>
8	5	<b>2</b>	<b>7</b>	<b>0.7</b>	<b>3</b>	<b>28</b>	<b>2.9</b>
9	4	<b>2</b>	<b>11</b>	<b>0.4</b>	<b>3</b>	<b>26</b>	<b>5.3</b>
10	4	-1	-9	-0.3	0	0	<b>1.0</b>
11	4	<b>1</b>	<b>13</b>	<b>0.1</b>	<b>1</b>	<b>13</b>	0.0
12	3	<b>1</b>	<b>9</b>	<b>0.9</b>	0	0	<b>0.3</b>
13	3	<b>1</b>	<b>4</b>	-0.6	<b>1</b>	<b>12</b>	<b>0.4</b>
14	3	0	0	-0.7	<b>2</b>	<b>16</b>	<b>0.1</b>
15	3	0	0	0	<b>1</b>	<b>12</b>	<b>1.0</b>
16	3	-3	-14	-1.0	<b>2</b>	<b>32</b>	<b>2.4</b>
17	3	-1	-7	-1.2	-2	-24	-0.9
<b>Sum</b>		3	<b>Sum</b>		18		
<b>Mean</b>		<b>0.18</b>	<b>Mean</b>		<b>1.06</b>		
<b>Std. Dev.</b>		1.30	<b>Std. Dev.</b>		2.48		

*Note.* SS = standard scores; AE = age equivalent (in years). Positive value changes are highlighted in boldface.

Individual changes and summary statistics are shown in Table 3. The mean change for 17 students is a decrease of 0.76 of a standard score, with a standard deviation of 1.83 standard scores. The greatest gain in Rate is two standard scores, corresponding to 25 percentile points, and the greatest loss is five standard scores, corresponding to 50 percentile points. The change in Age Equivalency for Rate ranges from -2.3 years to +1.3 years. In some cases, the slowing of oral reading rates is corroborated by individual weekly CBM data.

### **GORT-4 Changes in Oral Reading Accuracy**

Eleven of the 17 students (65%) increased their oral Accuracy score over 9 weeks, three showed no change in Accuracy and three declined in Accuracy. Individual changes and summary statistics are shown in Table 3. The mean change for 17 students is an increase of 0.76 of a standard score, with a standard deviation of 1.16 standard scores. The greatest gain in Accuracy is three standard scores, corresponding to 20 percentile points, and the greatest loss in Accuracy is one standard score, corresponding to 7 percentile points. The change in Age Equivalency for Accuracy ranges from -0.7 years to + 2.0 years. In some cases, greater attention to word accuracy is corroborated by individual weekly CBM data (see below).

### **GORT-4 Changes in Oral Reading Fluency**

The GORT Fluency score is a composite of the Rate and Accuracy scores. The mean loss in Rate for these students, 0.76 of a standard score, mirrors the mean gain in Rate, 0.76 of a standard score. Since Rate decreased for the students overall and Accuracy increased overall, with mean changes equivalent in magnitude but in opposite directions, we would expect the Fluency scores to show little change. Changes and summary statistics are shown in Table 4. The data indicate a slight increase in Fluency, with mean increase of 0.18 of a

standard score. Nine (53%) of the 17 students declined or had no change in Rate, but gained in Accuracy. Four students (24%) declined or showed no change in both Rate and Accuracy. Three students (18%) improved both their Rate and Accuracy scores and one improved Rate but not Accuracy. The change in Age Equivalency for Fluency ranges from -2.3 years to +1.3 years. For the group as a whole, losses in Rate balanced gains in Accuracy for little or no change in Fluency.

### **GORT-4 Changes in Oral Reading Comprehension**

Twelve of the 17 students (71%) increased their oral reading Comprehension score over the 9-week period, two showed no change in Comprehension, and 3 declined in Comprehension. Individual changes and summary statistics are shown in Table 4. The mean change for 17 students is an increase of 1.06 of a standard score, with a standard deviation of 2.56 standard scores. The greatest gain in Comprehension is eight standard scores, corresponding to 73 percentile points, and the greatest loss is four standard scores, corresponding to 47 percentile points. The change in Age Equivalence for Comprehension ranges from +5.3 years to -4.3 years.

On inspection, there are no striking patterns of relationship between changes in the Fluency and Comprehension scores. These data are summarized in Table 5, ranked from the greatest individual Comprehension gain to the least. The three students who show gains in both Rate and Accuracy also improved in Comprehension, as did the two students who show a gain in either Rate or Accuracy but not both. Four of five students who declined in Rate but gained in Accuracy also gained in Comprehension. Yet three students who gained in Comprehension declined or showed no change in both Fluency markers. Of the five students

**Table 5. Individual Changes Ranked From Highest to Lowest Gain on GORT-4 Fluency and Comprehension**

Student	Grade	GORT-4 standard scores			
		Rate change (SS)	Accuracy change (SS)	Fluency change (SS)	Comprehension change (SS)
6	6	-1	<b>1</b>	0	<b>8</b>
8	5	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>
9	4	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>
5	6	0	<b>3</b>	<b>2</b>	<b>2</b>
14	3	<b>1</b>	0	0	<b>2</b>
16	3	-5	-1	-3	<b>2</b>
2	6	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
4	6	-2	<b>1</b>	-1	<b>1</b>
7	5	0	0	0	<b>1</b>
11	4	-2	<b>1</b>	<b>1</b>	<b>1</b>
13	3	-1	<b>1</b>	<b>1</b>	<b>1</b>
15	3	0	-1	0	<b>1</b>
10	4	-4	<b>1</b>	-1	0
12	3	0	<b>1</b>	<b>1</b>	0
1	6	-1	0	-1	-2
17	3	-2	-1	-1	-2
3	6	-1	<b>1</b>	0	-4
<b>Sum</b>		-13	13	3	18
<b>Mean</b>		-0.76	<b>0.76</b>	<b>0.18</b>	<b>1.06</b>
<b>Std. Dev.</b>		1.83	1.16	1.29	2.48

*Note.* SS = standard scores. Positive value changes are highlighted in boldface.



who showed negative or zero growth in Comprehension, two demonstrated zero or negative growth in both Rate and Accuracy, and three showed zero or negative growth in Rate but increased in Accuracy.

At the close of the study, it was discovered that 6 of the 17 students had been simultaneously enrolled in a computer-based English language program that included a reading component, for an average of 10 total hours over the 9 weeks. Data from this study are presented in the section Competing Instruction, below, and the unplanned interference from this intervention is discussed in Chapter 5.

### **GORT-4 Changes in Miscue Patterns**

Miscue analyses of the GORT readings were made for every student. At least 25 miscues were analyzed (the first 25 miscues) on Form A, unless fewer than 25 miscues were made overall; on the corresponding passages in Form B, students frequently showed fewer miscues so, in four cases, additional (higher level) passages were analyzed for Form B, so that relative types of miscues could be compared. Change data and summary statistics are given in Table 6, showing the percentage change, pretest to posttest, for miscues that (a) have a meaning similar to the target word, (b) have a syntactic function similar to the target word, (c) share one or more graphophonic similarities with the target word, and (d) were self-corrected. For brevity of reporting, these are referred to as *similar-meaning*, *similar-function*, *graphophonically similar* (or *visually similar*), and *self-corrected* miscues. These labels are not exclusive of each other; a miscue may have a similar meaning and/or a similar function as, and/or be visually similar to, the target word, and also be self-corrected (or not). The

**Table 6. Individual Pretest to Posttest Changes in Types of Miscues Made During GORT-4 Readings**

Student	Grade	GORT-4 standard scores		Miscue types			
		Accuracy change (SS)	Comprehension change (SS)	Similar meaning % change	Similar function % change	Visually similar % change	Self-corrected % change
1	6	0	-2	<b>6</b>	<b>32</b>	<b>23</b>	<b>31</b>
2	6	<b>3</b>	<b>1</b>	-2	-17	<b>17</b>	-4
3	6	<b>1</b>	-4	-7	-19	-8	<b>27</b>
4	6	<b>1</b>	<b>1</b>	-4	-23	<b>11</b>	<b>15</b>
5	6	<b>3</b>	<b>2</b>	-4	-5	<b>6</b>	<b>13</b>
6	6	<b>1</b>	<b>8</b>	<b>4</b>	-27	<b>11</b>	-8
7	5	0	<b>1</b>	0	-1	-10	<b>2</b>
8	5	<b>1</b>	<b>3</b>	-1	<b>37</b>	<b>2</b>	<b>17</b>
9	4	<b>2</b>	<b>3</b>	<b>10</b>	-4	<b>30</b>	<b>10</b>
10	4	<b>1</b>	0	-5	-19	<b>21</b>	<b>10</b>
11	4	<b>1</b>	<b>1</b>	-10	-7	<b>24</b>	<b>11</b>
12	3	<b>1</b>	0	<b>13</b>	<b>14</b>	-7	<b>31</b>
13	3	<b>1</b>	<b>1</b>	<b>1</b>	<b>11</b>	0	<b>23</b>
14	3	0	<b>2</b>	-10	<b>15</b>	<b>24</b>	-34
15	3	-1	<b>1</b>	<b>4</b>	<b>57</b>	-11	<b>7</b>
16	3	-1	<b>2</b>	-11	-14	<b>4</b>	<b>22</b>
17	3	-1	-2	<b>7</b>	<b>4</b>	<b>13</b>	<b>27</b>
<b>Sum</b>		13	<b>18</b>	-9	34	150	200
<b>Mean</b>		<b>0.76</b>	<b>1.06</b>	-0.53	<b>2</b>	<b>8.82</b>	<b>11.76</b>
<b>Std. Dev.</b>		1.16	2.48	6.92	22.6	12.81	15.97

*Note.* SS = standard scores. Positive value changes are highlighted in boldface.

individual miscue percentages were each rounded to the nearest whole number at the time of recording, so data for percent changes pretest to posttest are also reported as whole numbers.

The first observation is that all 17 students made relatively few similar-meaning miscues, a mean of 6.5% of total miscues for the pretest, with a standard deviation of 5.3%, and a mean of 5.9% on the posttest, with a standard deviation of 5.9%. The mean individual change from pretest to posttest was a decrease of 0.5%. One student stands out with 20% similar-meaning miscues pretest and 18% posttest; 71% of the students show percentages of 10% or less on both tests.

Similar-function miscues are higher, a mean of 49.1% for the pretest, standard deviation 13.9%, and 51.3% for the posttest, standard deviation 21.8%. This is a mean increase of 2%, with an 8% increase in variability, from pretest to posttest. Seven of the 17 students show increased miscues based on similar function, while the other 10 students show a decrease. The greatest increase is 57% and the greatest decrease 27%.

Graphophonically (visually) similar miscues are even higher, a mean of 68.7% for pretest, with standard deviation 21.8%, and a mean of 77.9% posttest, with standard deviation 14.5%. This is a mean increase of 9% with a decrease in variability of 7%. Twelve of the 17 students show increased miscues based on visual similarity, while 4 show a decrease and one shows no change. The greatest increase is 30% and the greatest decrease 11%. The mean individual change is 8.8%, with a standard deviation of 12.8%.

Self-corrected miscues are relatively low for these students, but 14 of the 17 students (82%) increased their self-correction rates. For the pretest, there was a mean of 19.1% self-corrected miscues, with standard deviation 15.6%, and a mean of 30.9% for the posttest, with standard deviation 17.4%. This is a substantial increase in self-correction, 15% from pretest

to posttest, with a 2% increase in variability. The greatest self-correction rate is 57% pretest and 70% posttest. The largest increase is 31% for two students; the largest decrease is 34% for one student.

### **GORT-4 Changes in Prosodic Patterns**

Changes in prosodic patterns on the GORT passages were recorded anecdotally at the time of scoring, when the recordings were replayed and miscue analyses done. The most obvious and frequently noted differences were shifts in the naturalness of pitch (inclinations or declinations) at the end of sentences, changes in expressiveness (often characterized by word emphases), and changes in length of phrasing. Once miscues were analyzed, phrasing and end-of-sentence pitch changes were marked directly on the GORT passages. Remarks made during scoring of the GORT were incorporated later as notes on the Multidimensional Fluency Rubric, at the time the rubrics were scored by the researcher. (The rubrics were also scored independently by the classroom teacher, who had access to the passage text and recordings but not the individually marked passages.) Specific types of prosodic changes were striking for some students.

For many students, differences in prosodic fluency from pre- to posttest, or from one level to the next within either test, appear to have a strong relationship to the familiarity of the passage content, as presumed by the researcher. For three of the six pairs of stories used for the prosodic assessment, one of the stories (Form A or Form B) is judged to be more familiar than its same-level counterpart, as indicated in Column 3 of Table 7. Stories with content about families and neighborhoods are presumed to be more familiar, while stories involving mythological, emblematic, historical or “culturally different” material are

**Table 7. Individual Changes in Prosody Features, Ranked From Greatest to Least Gain on Highest-Level Pair of GORT-4 Passages Matched by Difficulty, Based on the MFR**

Student	Grade	GORT-4 level of paired passages		Expression and volume		Phrasing		Smoothness		Pace		Overall	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
<b>2</b>	6	4*	5**	<b>1.25</b>	0.5	1	<b>1.25</b>	0	<b>0.5</b>	1	1	3.25	3.25
<b>16</b>	3	3	5**	0.5	<b>0.75</b>	0.75	0.75	-0.5	<b>0.25</b>	1.25	<b>0.75</b>	-0.5	<b>2.5</b>
5	6	4*	6*	1	<b>1.25</b>	0.5	0.5	0.5	0.5	<b>0</b>	-0.25	2	2
<b>15</b>	3	2	3	0.25	0.25	<b>1</b>	0.25	<b>1.5</b>	0.5	1	1	<b>3.75</b>	2
3	6	6*	7***	<b>0.5</b>	0.25	0.25	<b>0.5</b>	0.25	<b>0.5</b>	0.25	<b>0.5</b>	1.25	<b>1.75</b>
<b>9</b>	4	4*	5**	-0.5	<b>0.75</b>	0	0	0	<b>0.5</b>	-0.25	<b>0.5</b>	-0.75	<b>1.75</b>
<b>10</b>	4	5**	6*	0	0	0.5	0.5	<b>0.75</b>	0.5	0.5	0.5	<b>1.75</b>	1.5
<b>6</b>	6	4*	5**	<b>0.5</b>	0	0	0.25	0.25	<b>1</b>	0	0	0.75	<b>1.25</b>
<b>8</b>	5	4*	5**	-0.25	<b>0</b>	0	0	0.25	<b>0.5</b>	0.25	<b>0.75</b>	0.25	<b>1.25</b>
<b>13</b>	3	2	3	<b>1.25</b>	0.25	<b>0.75</b>	0.5	<b>1</b>	0	<b>1.5</b>	0.5	<b>4.5</b>	1.25
<b>7</b>	5	5**	6*	0	0	<b>0.5</b>	0.25	<b>0.5</b>	0.25	<b>0.5</b>	0.25	<b>1.5</b>	0.75
<b>1</b>	6	5**	6*	<b>1.5</b>	0	<b>0.25</b>	0.25	<b>0</b>	-0.25	<b>0.25</b>	-0.25	<b>2</b>	-0.25
<b>11</b>	4	5**	6*	0	0	<b>0.5</b>	-0.25	<b>0.5</b>	0	<b>0.5</b>	0	<b>1.5</b>	<b>-0.25</b>
14	3	3	4*	-0.25	<b>0</b>	-1	<b>-0.25</b>	0	0	-0.25	0	-1.5	<b>-0.25</b>

(table continues)

**Table 7. (continued)**

Student	Grade	GORT-4 level of paired passages		Expression and volume		Phrasing		Smoothness		Pace		Overall	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd	1st	2nd
4	3	4*	5**	<b>0.75</b>	0	<b>0.5</b>	0.25	<b>0.25</b>	0	<b>-0.5</b>	-0.75	<b>1</b>	-0.5
12	3	3	4*	-0.5	-0.5	<b>0.25</b>	0	<b>0.25</b>	-0.5	<b>0.25</b>	-1	<b>0.25</b>	-2
17	3	3	4*	-0.75	-0.75	-0.25	-0.25	-1	-1	-1.25	<b>-1.5</b>	-3.25	<b>-3.5</b>

*Note.* Each pair of passages (1st pair and 2nd pair) is matched by level; the higher score for each pair is shown in boldface.

\*Topic familiarity: Form A familiar, Form B unfamiliar.

\*\*Topic familiarity: Form B familiar, Form A unfamiliar.

\*\*\*Topic familiarity: Both passages considered unfamiliar.

considered to be less familiar. For one of the story pairs, a story involving a cat could be familiar for some students and not others, those whose cultures do not favor such pets. For another pair, both stories are considered to be equivalent in familiarity. And for the sixth pair, both stories are considered to be unfamiliar, with one slightly less so.

### **READING ACHIEVEMENT: MULTIDIMENSIONAL FLUENCY RUBRIC**

Each student's oral text reading during the GORT-4 was audio recorded and analyzed postintervention by two raters, the researcher and the classroom teacher. The Multidimensional Fluency Rubric (MFR) characterizes four dimensions of prosodic reading: Expression and Volume, Phrasing, Smoothness, and Pace. Each dimension is rated on a 4-point scale.

Individual pre- to posttest changes for each scored passage, first and second, and for the two passages combined, are summarized in Tables 7 and 8. These are shown by student and ranked from greatest overall change to least overall change. Interpretation of these scores is complicated by (a) the passage-familiarity effect noted above, (b) the fact that a rubric scale is only nominally equal-interval (for example, a change of 1 point from Score 1 to Score 2 for any component may be a much greater learning accomplishment for a student than a change of 1 point between Score 2 and Score 3), and (c) the fact that the children did not read identical pairs of passages; in fact, the children were scored on six different pairs of passages, according to their levels, as indicated in Column 3 of each table.

Eleven (65%) of the 17 students show patterns consistent with hypothesized familiarity effects. In Table 7, students 13 and 15 show the type of progress we would expect if the topics of both passages in each pair are familiar: higher scores for the lower-level

**Table 8. Individual Changes in Overall Prosody, Ranked From Greatest to Least Gain on Two Pairs of GORT-4 Passages, Based on the MFR**

Student	Grade	GORT passages	Expression and volume	Phrasing	Smoothness	Pace	Overall
2	6	4, 5	1.75	2.25	0.5	2	6.5
15	3	2, 3	0.5	1.25	2	2	5.75
13	3	2, 3	1.5	1.25	1	2	5.75
5	6	4, 6	2.25	1	1	-0.25	4
10	4	5, 6	0	1	1.25	1	3.25
3	6	6, 7	0.75	0.75	0.75	0.75	3
11	4	5, 6	0.75	0.5	0.75	1	3
16	3	3, 4, 5	1.5	1.75	-0.25	-0.5	2.5
7	5	5, 6	0	0.75	0.75	0.75	2.25
6	6	4, 5	0.5	0.25	1.25	0	2
1	6	5, 6	1.5	0.5	-0.25	0	1.75
8	5	4, 5	-0.25	0	0.75	1	1.5
9	4	4, 5	0.25	0	0.5	0.25	1
4	3	4, 5	0.75	0.75	0.25	-1.25	0.5
14	3	3, 4	-0.25	-1.25	0	-0.25	-1.75
12	3	3, 4	-1	0.25	-0.25	-0.75	-1.75
17	3	3, 4	-1.5	-0.5	-2	-2.75	-6.75

passage, which is presumed to be less challenging. Students 6, 8, and 9, show a reverse pattern, against expectation: better scores for the higher-level passage; however, for this pair of passages, the posttest Form B is considered to more familiar than Form A, while the opposite is true for the lower-level pair of passages. Students 1, 7, 10, and 11, show a pattern similar to that of students 13 and 15, higher scores for the lower-level passage; for this pair of passages, the posttest Form B is considered to be more familiar than Form A, while the



opposite is true for the higher-level pair of passages. Students 12 and 16 also show the expected pattern, with both passages in the lower-level pair familiar, and the first passage of the higher-level pair more familiar than the second passage. While the scores for the other six students do not show these patterns as cleanly, only two students, 4 and 14, have scores strongly inconsistent with this hypothesis. Of course, background familiarity with a particular passage can be highly individual, and the students were never actually evaluated for background knowledge of any of the passages.

### **Changes in Expression and Volume**

Individual students demonstrated great variation in growth of prosodic reading of level-equivalent GORT passages, as rated on the MFR. The ranges for change of Expression and Volume from pre- to posttest are -0.75 to 1.25 for both passages. (Here, “passage” refers to a pair of passages at the same level, one read preintervention and one read postintervention.) Seven of 17 students (41%) show no growth or a decline on the first passage and 10 students (59%) show no growth or a decline on the second passage; 4 of these are the same students (24%). This means that 76% of the students demonstrated an increase in Expression and Volume on at least one of the passages. Six of 17 students (35%) showed an increase on both passages. Four students increased their score by one or more rubric points for the first passage and one student for the second passage.

### **Changes in Phrasing**

The ranges for change in Phrasing from pre- to posttest are -1 to 1 for the first passage and -0.25 to 1.25 for the second passage. Five of 17 students (29%) show no growth or a decline on the first passage and 5 of 17 (29%) on the second passage; 4 of these are the same

students (24%). This means that 76% of the students demonstrated an increase in Phrasing on at least one of the passages. Seven of 17 students (41%) showed an increase on both passages. Two students increased their scores by one or more rubric points for the first passage and one student for the second passage.

### **Changes in Smoothness**

The ranges for change in Smoothness from pre- to posttest are -1 to 1.5 for the first passage and -1 to 1 for the second passage. Six of 17 students (35%) show no growth or a decline on the first passage and 7 of 17 (41%) on the second passage; 4 of these are the same students (24%). This means that 76% of the students demonstrated an increase in Smoothness on at least one of the passages. Eight of 17 students (47%) showed an increase on both passages. Two students increased their scores by one or more rubric points for the first passage and one for the second passage.

### **Changes in Pace**

Changes in Pace show the greatest variability of all. The ranges from pre- to posttest are -1.25 to 1.5 for the first passage and -1.5 to 1 for the second passage. Seven of 17 students (41%) show no growth or a decline on the first passage and 8 of 17 (47%) on the second passage; however, only 5 of these are the same student (24%). This means that 76% of the students demonstrated an increase in Pace on at least one passage. Six of 17 students (35%) showed an increase on both passages. Four students increased their scores by one or more rubric points for the first passage and two for the second passage, suggesting that most of the growth in Pace comes from the contributions of a few students.

### **Overall Changes in Prosody**

The ranges for overall growth in prosodic reading are -3.25 to 4.5 on the first passage and -3.5 to 3.25 on the second passage. Three of 17 students (18%) declined overall on the first passage while 6 of 17 (35%) declined on the second passage; 3 of these are the same students (18%). This means that 82% of the students demonstrated overall prosodic growth on both passages.

Four students (18%) showed prosodic growth on all four elements for the first passage and four (18%) for the second passage; only one of these is the same student. An additional six students (35%) showed prosodic growth on three elements for the first passage and an additional four students (24%) for the second passage. This means that 59% of the students demonstrated growth on three or four elements for the first passage and 47% for the second passage. Two students (12%) showed growth on two of four elements for the first passage and three students (18%) for the second passage. This means that 71% of the students demonstrated prosodic growth on two or more elements for the first passage and 65% for the second passage. One student demonstrated negative growth on all four elements of the first passage, but not the second passage. Two students demonstrated no growth or negative growth on all four elements of the second passage, but not the first passage. Three students increased their Overall scores by three or more rubric points for the first passage, and one for the second passage; five students (29%) increased their Overall scores by two or more points for the first passage, and four (24%) for the second passage.

### **Rating Discrepancies**

A total of 280 data points were scored by each rater, 16 for each of 16 students and 24 for the 17th student. Of these, 120 data points, or 42.9%, were not discrepant. An additional 105 data points, or 37.5%, were discrepant by 0.5 point. This means that 80.4% of the data points were discrepant by 0.5 point or less. Fifty-five data points, or 19.6%, were discrepant by 1.0 point or more and had to be adjusted to within 0.5 points of each other, according to the method described in Chapter 3. Thirteen of the 55 discrepant points, or 24%, came from one student, a girl with a speech impediment. An additional 28 of the 55 points (51%) came from six students. This means that scores for 7 (41%) of the 17 students accounted for 76% of the discrepancies. Scores for 10 students (59%) had 3 or fewer discrepancies of 1.0 point or more among 16 data points.

### **READING ACHIEVEMENT: CURRICULUM BASED MEASUREMENT**

Study participants read aloud from unpracticed text for 1 minute, at intervals of 1 to 2 weeks. The readings were recorded and analyzed for word-reading rate and accuracy. Two 1-minute readings during Week 1 served as an initial baseline for each student. Following that, each student read five or six more times over the remaining 8 weeks. Tables 9, 10 and 11 illustrate differing patterns of CBM data, for each of three students chosen as examples. The first student (Table 9) shows steady rate growth over 5 weeks, with little change in accuracy; on GORT-4 she improved both her Rate and Accuracy by two standard scores. The second student (Table 10) shows inconsistent CBM rate over 7 weeks, with no evidence of fluency growth; he improved his Rate on GORT-4 by one standard score and his Accuracy by two standard scores. The third student (Table 11) shows overall loss of rate over 7 weeks,

**Table 9. Example Student 1: Steady CBM Growth in Rate, Little Change in CBM Accuracy**

Date	Type and level of passage	Unadjusted rate (WPM)	Miscues	Self-corrections	Adjusted rate (WCPM)	Accuracy (WCPM/WPM)
Jan 28	SS/D3	72	15	1	57	79
Jan 28	Sci/D3	77	12	4	65	84
Feb 10	SS/D1	53	10	2	43	81
Feb 23	Sci/C1	64	6	2	64*	91
Mar 5	Sci/C1	83	6	1	77	93
Mar 11	Sci/C1	92	8	1	84	91
Mar 19	Sci/C1	92	4	1	88	96
Mar 27	SS/C1	98	8	3	90	92

*Note.* This fourth-grade student improved both Rate and Accuracy by two standard scores on the GORT-4, over 9 weeks. SS = Social Studies; Sci = Science.

\*Base rate used for comparisons.

**Table 10. Example Student 2: Inconsistent CBM Rate, No Growth in CBM Fluency**

Date	Type and level of passage	Unadjusted rate (WPM)	Miscues	Self-corrections	Adjusted rate (WCPM)	Accuracy (WCPM/WPM)
Feb 3	SS/C3	70	5	2	65	93
Feb 3	Sci/C3	74	4	1	70	95
Feb 12	Sci/C1	84	6	2	78	93
Feb 27	Sci/C1	74	4	0	70	95
Mar 9	Sci/C1	53	9	4	44	83
Mar 18	Sci/C1	69	1	0	68	99
Mar 23	Sci/C1	69	6	4	63	91
Mar 27	SS/C1	70	5	1	65	93

*Note.* Over the same period, this sixth-grade student improved both his Rate on GORT-4 by one standard score and his Accuracy by two standard scores. SS = Social Studies; Sci = Science.

**Table 11. Example Student 3: Rate Loss on CBM, Inconsistent CBM Accuracy**

Date	Type and level of passage	Unadjusted rate (WPM)	Miscues	Self-corrections	Adjusted rate (WCPM)	Accuracy (WCPM/WPM)
Jan 28	SS/D3	111	17	1	94	85
Jan 28	Sci/D3	114	10	1	104	91
Feb 10	SS/D1	98	10	1	88	90
Feb 23	SS/D1	96	12	0	84	88
Mar 5	SS/D1	81	18	1	63	78
Mar 11	SS/D1	91	6	0	85	93
Mar 19	SS/D1	101	12	1	89	88
Mar 31	Sci/D1	86	5	1	81	94

*Note.* This fourth-grade student's rate on GORT-4 decreased by four standard scores, while Accuracy improved by one standard score, over the same period. SS = Social Studies; Sci = Science.

with inconsistent accuracy; her Rate on GORT-4 decreased by four standard scores while her Accuracy improved by one standard score.

The baseline rate was reconsidered for all the students. Nine of the 17 participants (53%) were re-assigned to a lower curriculum level for QuickReads® after Week 2. These decisions were based on observed accuracy rates representative of typical frustration levels and on success with comprehension questions for the passages, as related in the section on Instructional Decisions, above. For these nine students, it makes the most sense to examine data from Week 4 to Week 9, a total of five readings for each student (four, in two cases); no data were collected for any student during Weeks 3 or 8. During Week 1, all students read from Book 3 of their curriculum; following that, all students read from Book 1. Therefore, for the other eight students, it makes sense to look at data from Week 2 to Week 9, a total of six readings for each student. These data, both rate (WCPM) and accuracy (WCPM as a

percentage of total words read), are summarized in Tables 12 and 13, along with means and changes from the adjusted baseline (Week 2 or Week 4) to Week 9. Changes in GORT Rates, pre- to posttest, are shown for comparison.

For 7 of 17 students (41%), CBM data appear to corroborate changes in Rate measured with the GORT (Table 12); this means that for the majority of participants (59%) the direction of change for CBM is opposite the direction of change for GORT. Taking into consideration only the first and last data points (Week 9 minus adjusted baseline, Week 2 or Week 4), 11 of 17 students (65%) show a slow down, or no change, in CBM reading rates (WCPM) over the 5- or 6-week period indicated; only eight of these students show a concomitant drop in their GORT Rate. When one looks at CBM means for these students, 5 of the 11 show a mean rate *higher* than both the initial and final readings; for these students, the five or six data points fluctuate wildly; three of them show no change or positive growth in GORT rate. Conservatively, these data suggest a “true” slow down in CBM reading rate, corroborated by GORT, for five students. Again taking into consideration only the first and last data points, five of the students show an increase in CBM reading rates (WCPM) over the 5- or 6-week period, but only two of these students show growth in Rate with the GORT; mean rates are not particularly informative in these cases. Taking into consideration both initial-final rate differences and mean rates for CBM, compared with changes measured with GORT, there appears to be consistency between CBM and GORT rates for seven students (41%).

**Table 12. Individual Changes in CBM Oral-Reading Rates for 1 Minute on Unpracticed Text, Ranked From Greatest to Least Gain, Compared to Changes in GORT-4 Rate**

Student	Grade	GORT-4 rate change (SS)	CBM Number of words read correctly in 1 minute							
			Week 2	Week 4	Week 5	Week 6	Week 7	Week 9	Change	Mean
3*	6	-1		57	117	93	96	97	40	92.0
9*	4	2		64	77	84	88	90	26	80.6
5	6	0	65	63	82	53	49	83	18	65.8
12*	3	0		53	66	61	72	60	7	62.4
8*	5	2		77		76	67	80	3	75.0
15	3	0	41	67	39	68	50	43	2	51.3
17*	3	-2		72	67	48	71	72	0	66.0
1*	6	-1		67	87	81	59	65	-2	71.8
13	3	-1	39	60	24	40	39	37	-2	39.8
7*	5	0		101		68	110	96	-5	93.8
14	3	1	47	67	49	34	62	42	-5	50.2
10	4	-4	88	84	63	85	89	81	-7	81.7
11	4	-2	99	102	67	97	89	91	-8	90.8
6	6	-1	89	69	79	63	65	80	-9	74.2
2	6	1	78	70	44	68	63	65	-13	64.7
16*	3	-5		77	75	58	63	62	-15	67.0
4*	6	-2		102	72	74	85	79	-23	82.4

*Note.* Changes in GORT-4 Rate (standard scores) are shown for comparison.

\*Student's instructional placement for QuickReads® was changed Week 3. No readings were made Week 3 or Week 8.



**Table 13. Individual Changes in CBM Oral-Reading Accuracy for 1 Minute on Unpracticed Text, Ranked From Greatest to Least Gain, Compared to Changes in GORT-4 Accuracy**

Student	Grade	GORT-4 rate change (SS)	CBM Number of words read correctly in 1 minute							
			Week 2	Week 4	Week 5	Week 6	Week 7	Week 9	Change	Mean
8*	5	1		89		86	86	94	5	88.8
12*	3	1		87	97	92	95	92	5	92.6
7*	5	0		94		96	98	98	4	96.5
10	4	1	90	88	78	93	88	94	4	88.5
11	4	1	94	90	91	94	95	98	4	93.7
3*	6	1		92	95	99	94	95	3	95.0
17*	3	-1		95	93	84	95	97	2	92.8
1*	6	0		88	96	92	88	89	1	90.6
6	6	1	86	93	86	91	94	87	1	89.5
9*	4	2		91	93	91	96	92	1	92.6
2	6	3	93	95	83	99	91	93	0	92.3
15	3	-1	80	94	93	94	83	80	0	87.3
5	6	3	94	90	94	95	94	93	-1	93.3
14	3	0	76	81	92	93	87	75	-1	84.0
4*	6	1		94	83	88	97	91	-3	90.6
16*	3	-1		93	97	92	89	89	-4	92.0
13	3	1	89	85	83	82	91	84	-5	85.7

*Note.* Changes in GORT-4 Rate (standard scores) are shown for comparison.

\*Student's instructional placement for QuickReads® was changed Week 3. No readings were made Week 3 or Week 8.

The CBM data present a similar picture for reading accuracy (Table 13). For 8 of 17 students (47%), CBM data appear to corroborate changes in Accuracy measured with the GORT; this means that for the majority of participants (53%), the direction of change for CBM is opposite the direction of change for GORT. Taking into consideration only the first and last data points (Week 9 minus adjusted baseline, Week 2 or Week 4), 10 of 17 students (59%) show growth in CBM reading accuracy over the 5- or 6-week period indicated; 7 of these students show concomitant growth in their GORT Accuracy; two show no change in GORT Accuracy; and one shows a loss of Accuracy with GORT. Examination of the means confuses the picture even more. Four students show CBM means *higher* than the final reading and two show CBM means *lower* than the initial reading. Taking into consideration both initial-final accuracy differences and mean rates for CBM, the data suggest a “true” increase in CBM reading accuracy, corroborated by GORT, for four students (24%). Again, taking into consideration only the first and last data points, five of the students show a decrease in CBM reading accuracy over the 5- or 6-week period; only one of these students shows a concomitant decrease in Accuracy as measured by GORT. Two students show no growth in CBM reading accuracy; one of these shows a gain with GORT and the other a loss. In five of these seven cases, the CBM mean is *higher* than the final accuracy measure; two of these cases show gains with GORT. Taking into consideration both initial-final accuracy differences and mean rates for CBM, compared with changes measured with GORT, there is consistency between CBM and GORT for three students (18%).

The overwhelming conclusion is that rate and accuracy from CBM readings made from the QuickReads® passages do not agree well with GORT-4 Rate and Accuracy scores, for most of these 17 students. Since the data collection methods were the same for each

instrument, and made by the same test administrator, it is most likely that differences in passage content and accompanying task demands account for the dissimilarity.

### **READING ACHIEVEMENT: COMPETING INSTRUCTION**

Six of the 17 students also participated in a computer-based language intervention, which began a week after the study and continued over the same time period, a decision that was not apparent to the researcher at the time. The researcher knew of the language intervention and helped launch it, but her understanding was that it would initially serve only Beginning-level ELLs; however, some Early Intermediate learners and some Intermediate ELLs with IEPs were also included in the first licensing quota and this did not come to the attention of the researcher until the end of the study. Four of the six sixth-graders, one fifth-grader, and one third-grader, four boys and two girls, involved in the fluency study were also involved in the computer intervention. These students spent a low of 6 hours to a high of 21 hours logged into the language program over the course of the study. The average time per week ranged from 44 minutes to 141 minutes. This time included lessons in vocabulary, listening comprehension, conversation, phonemic awareness, word recognition and reading, dynamically adjusted for the student's current response levels. Reading lessons included variable components, depending on the students' needs: decodable words, word family patterns, comprehension, letter sounds, phonemic awareness, sight words, and punctuation. Repeated or timed readings were not part of the reading component.

The reading gains for each of these students are summarized in Table 14.

All six students (100%) made gains in Accuracy and Comprehension on the GORT, compared to 65% and 71% for the study group as a whole, inclusive of these six. Two of the

**Table 14. GORT-4 and MFR Changes for Six Students Simultaneously Enrolled in a Computer-Based Language Program**

Student	Grade	Time in language program (hr: min)	GORT rate change (standard scores)	GORT accuracy change (standard scores)	GORT comprehension change (standard scores)	MFR changes on both passages
A	3	20: 51	-5	-1	+4	+ Expression + Phrasing
B	6	14: 09	+1	+3	+1	+ Expression + Phrasing + Smoothness + Pace
C	6	7: 48	-1	+1	+6	
D	6	7: 27	0	+3	+2	+ Expression
E	6	7: 04	-2	+1	+1	
F	5	6: 13	+2	+1	+3	

sixth graders in this group made huge gains in Comprehension, growth of 4 and 6 standard scores; one of them spent 21 hours in the language program, far more than any other student, and the other spent 8 hours. Both had IEPs and had been learning English in school since Kindergarten. The student with 8 hours in the language program, who gained six standard scores, had anomalous results on her GORT post-test, compared to the other study participants. She continued to score 4 or 5 out of 5 correct on Comprehension questions, even after her Fluency scores dropped to zero. Her final score was based conservatively on those passages for which her Fluency was a 2 or higher; for the last passage, not included in the scoring, she answered correctly all five of the comprehension questions without reading the passage at all.

### **READING ACHIEVEMENT: TESTING ENVIRONMENT**

The testing environment was highly consistent, both across students and for each individual student over time. During the posttesting session, however, one third-grade student showed signs of inattention not typical of him during the weekly sessions. The researcher questioned the student about it, but he did not express a desire to stop, so she continued. In retrospect, this was a poor decision. The child's scores plummeted, relative to the pretest, and are considered to be atypical for this child at that time. They also dramatically skewed the group results, contributing to the decision not to test pre/post significance levels.

### **READING ACHIEVEMENT: TRENDS IN STUDENT LEARNING**

The descriptive statistics developed in Tables 2 to 13 suggest five trends in the development of oral text-reading fluency for the 17 Intermediate-level ELLs in this study:

1. Many students were paying greater attention to word-level decoding at the end of 9 weeks' intervention. Students appeared, on average, to be slowing down to pay more attention to the graphophonic features of words, contrary to expectation.
2. Most students gained in receptive comprehension of unfamiliar passages (answering multiple choice questions) but continued to show difficulty with expressive comprehension tasks (short answer responses).
3. Most students showed overall prosodic growth on unfamiliar passages matched by level, as expected.
4. For each of four prosodic elements of reading, most students showed growth, as expected.
5. As a group, third graders made markedly lower gains in prosodic reading than older students.

Each of these trends is reviewed and discussed in Chapter 5.

## **CHAPTER 5**

### **DISCUSSION**

Interpretation and discussion of the research is presented in three main sections.

1. **Learning Trends**

Five trends summarizing the study students' learning were presented at the end of Chapter 4. These are discussed in four sections. Three sections discuss results for each of the three types of data collected: GORT-4, MFR, and CBM. The fourth section discusses the divergent trend for GORT Rate and MFR Pace.

2. **Lessons Learned**

Lessons learned from the study are discussed in 10 sections. Limitations of the study are presented as they arise within each topic.

3. **Recommendations and Directions for Research**

Provisional suggestions for classroom practice are made, along with possible directions for future research. These are organized as a summary list of 17 cautions and recommendations and a hypothetical redesign of the study based on the lessons learned.

### **LEARNING TRENDS**

The descriptive statistics developed in Chapter 4 (Tables 2-13) suggest several trends in the development of oral text-reading fluency for the 17 Intermediate-level English language learners (ELLs) in this study. These may be summarized as follows:

- Many students were paying greater attention to word-level decoding at the end of 9 weeks' intervention. On average, students appeared to be slowing down, contrary to expectation, to pay more attention to the graphophonic features of words.
- Most students gained in receptive comprehension of unfamiliar passages (answering multiple choice questions) but continued to show difficulty with expressive comprehension tasks (short answer responses).

- Most students showed overall prosodic growth on unfamiliar passages matched by level.
- For each of four prosodic elements (Pace, Expression, Volume, Smoothness) of reading, most students showed growth.
- As a group, third graders made markedly lower gains in prosodic reading than older students.

These findings are discussed within the following four sections:

1. Fluency Growth: GORT-4
2. Fluency Growth: Multidimensional Fluency Rubric
3. Rate versus Pace
4. Fluency Growth: Curriculum Based Measurement.

### **Fluency Growth: GORT-4**

Pre- to posttest increases in visually similar and self-corrected miscues, along with increases in GORT-4 Accuracy scores, suggest that many students in the study were paying greater attention to word-level decoding at the end of 9 weeks' intervention.

- About half (53%) of the students demonstrated a *decrease* in oral-reading Rate, while two-thirds (65%) *increased* their oral-reading Accuracy score. For the group as a whole, losses in Rate balanced gains in Accuracy for little or no overall change in Fluency. This was an unexpected result for an intervention designed to increase oral text-reading fluency. The formative nature of the instruction clearly contributed to this outcome; in particular, there was increasing emphasis on word-level decoding during brief weekly sessions with individual students. For six of the students, it is probable that a language intervention that was not part of the study contributed to increased attention to word-level reading.
- A majority of the students (71%) increased the Comprehension score for their oral reading. There are no obvious patterns of relationship between changes in the GORT Fluency and Comprehension scores (Table 4). Students who increased in Comprehension exhibited a variety of patterns of change in Rate and Accuracy. Increases in comprehension were anticipated, but these data appear to be fairly independent of changes in rate and accuracy, as measured with this instrument.
- A majority of the students (71%) increased the percentage of their miscues based on visual similarity but not the percentage based on similar function or meaning.

The mean increase was 9%. It appears that students, on average, were slowing down to pay more attention to graphophonic features of words.

- Many students (82%) increased the percentage of miscues which they self-corrected. There was a mean increase of 12%, although the rates of self-correction remained low for these students. This is consistent with the suggestion that students were slowing down to pay more attention to visual features of words, as rates for miscues consistent with visual information increased dramatically compared with rates for miscues consistent with semantic or syntactic information. Stated simply, the nature of self-corrections revealed greater reliance on graphophonic cues rather than attention to syntactic and semantic cues, and this reliance grew pretest to posttest.

### **Fluency Growth: Multidimensional Fluency Rubric**

Prosodic oral-reading growth was in the expected direction for most students on one or both of the paired passages. Differences in familiarity between some of the paired passages, as related in Chapter 4, may explain why growth was not always seen for both pairs of passages. The majority of students (82%) demonstrated overall prosodic growth on both passages. More than half (59%) demonstrated growth on three or four (all) prosodic elements for the first passage, slightly less than half (47%) for the second passage.

- The majority of students (76%) demonstrated an increase in MFR Pace on at least one passage. A third (35%) showed an increase on both passages. This finding appears to contradict the overall drop in Rate, an average of 0.76 standard scores, for the GORT passages as a whole, but probably reflects the different ways reading speed is measured or interpreted by these two instruments. In the next section, GORT-4 is argued to be the more reliable.
- The majority of students (76%) demonstrated an increase in MFR Expression and Volume on at least one of the two passages. A third (35%) showed an increase on both passages.
- The majority of students (76%) demonstrated an increase in MFR Phrasing on at least one of the two passages. More than a third (41%) showed an increase on both passages.



- The majority of students (76%) demonstrated an increase in MFR Smoothness on at least one of the two passages. Nearly half (47%) showed an increase on both passages.
- Third graders showed negative growth in prosodic elements far more than older students, particularly for MFR Pace (see Table 8). This grade-level pattern does not hold for the decreases in GORT Rate. Directing students' attention to prosodic elements before a certain skill-level of reading has been reached may be useless or counterproductive for younger students with Intermediate proficiency in English; such an observation is consistent with the limited-attention construct of Automaticity Theory (Lagerge & Samuels, 1974). Alternately, a social learning environment that includes reading in front of older students may be counterproductive, as it may have increased the affective filter for these students (Krashen, 1982b). Martinez et al. (1999) claimed that 12 weeks of performance reading greatly improved reading rate and accuracy for first-grade Hispanic students of low-SES status, who almost certainly included ELLs. However, there were no measurements of prosody reported, and those students were 2 years younger than the youngest children in this study and at a stage when they were just beginning to read.
- GORT alternates stories with information, so the passages do not afford consistent opportunity for expression based on dramatic interpretation, such as emotional content carried by characters. For some pairs of passages, this might have affected MFR Expression scores.

### **Rate Versus Pace**

How can the results for GORT Rate differ markedly from those for Pace on the MFR?

The obvious explanation is that Rate is an objective measure and Pace is a subjective rating. GORT Rate scores are based on simple arithmetic calculations for the number of words read correctly within specified windows of time. Pace, on the other hand, is a nominal score chosen subjectively from several descriptions on a rubric that uses relative language. Take, for example, the Score 1 and Score 2 descriptors for Pace. What is the essential difference between “Reads slowly and laboriously” and “Reads moderately slowly”? What seems laborious to one observer may seem moderately slow to another. Moreover, what is “laborious” for a sixth grader might be considered “moderately slow” or even “fast and slow”

(score point 3) for a third grader. The two raters listened and scored each student's pre- and postreadings at the same time, to compare them meaningfully. They also took time to calibrate with each other for use of the rubric, prior to the actual scoring, but they never "calibrated" their subjective impressions of Pace with the objective Rate scores for the same passages. This would have required that MFR ratings from the calibration sessions be immediately cross-checked with GORT scores. This might have generated productive discussion from which the four MFR components could have been recognized and scored more distinctly from one another. Also, GORT Rate was based on a succession of leveled passages, as many as nine for some students, whereas MFR Pace scores were based on only two of these passages, one level apart. Furthermore, the researcher, as rater, recorded anecdotal notes that remarked on several students' "base rate," taken to be the background pace at which *most* of the passage was read, against which the student *occasionally* slowed down for a more challenging part; such slowdowns might be accounted for by the MFR Smoothness component rather than the Pace component. Pace descriptors such as "reads slowly and laboriously" involve elements from Smoothness, such as reading with hesitations and repeats, so that Pace and Smoothness may not map together in a rater's mind.

In Chapter 4, inconsistency in the familiarity of GORT-4 passage content was hypothesized to have influenced individual gains in MFR scores. The analysis was made only for the two passages (per student) used for MFR scoring, although each student read well more than two passages for their GORT scores. It is possible that differences in pre- and posttest familiarity among all the GORT passages a student read account for some of the differential effects on Rate and Pace changes. The NLP literature supports use of familiar

content with ELLs (Lesaux & Geva, 2008) and this support generalizes to fluent English speakers (Goldenberg, 2008).

The conclusion of this researcher is that the MFR has pedagogical value for increasing student and teacher awareness of the prosodic dimension of fluency, but cannot be considered an accurate research tool. A more objective system is recommended for research, such as a method for marking phrase lengths, counting repetitions, and scoring pitch changes and volume emphasis on words. The researcher, as rater, found it necessary to make *ad hoc* markings of these types in order to make sense of the rubric. Sometimes the results were surprising. For instance, a child who was subjectively marked Score 3 for Phrasing, “some choppiness,” would be revealed to be using two or three word phrases (Score 2) when the phrases were actually marked. Since only one of the raters, the researcher, made and had access to these markings, this may have contributed to discrepancies between the two raters reported in Chapter 4.

The prosodic results are, overall, in the right direction, but the scores on the MFR cannot be averaged or manipulated statistically because the scores do not represent equal intervals. Count procedures for various aspects of prosody, while still somewhat subjective in some instances, have better potential for statistical description of changes in prosody in a research setting. Finer recommendations are made in the section on Testing Instruments. However, the researcher applauds the continued use of the rubric for students and teachers. This study did not make use of the rubric with the students as a teaching tool, as originally planned; the rubric was deemed too abstract for these students, who were struggling to coordinate several new aural dimensions of English. The contribution of computer-based assessment to prosodic evaluation is also discussed in the section Type of Instruction.

## Fluency Growth: Curriculum Based Measurement

For many students, Curriculum Based Measurement was more inconsistent from week to week than expected, and initial-final differences for rate and accuracy do not corroborate the concurrent GORT measurements.

- For a majority of students (59%), the direction of change for CBM rate was *opposite* the direction of change for GORT Rate. For reasons developed in Chapter 4, the data suggest a “true” slow down in CBM reading rate, corroborated by GORT, for 29% of the students.
- For half of the students (53%), the direction of change for CBM accuracy is *opposite* the direction of Accuracy changes for GORT. For reasons developed in Chapter 4, the data suggest a “true” increase in CBM reading accuracy, corroborated by GORT, for 24% of the students.
- Anecdotal notes accompanying CBM sessions suggest that many students made better predictions from text features (title, picture, caption) as the intervention proceeded but were not well able to express what they had learned from a single oral reading. Since the students as a group show growth in Comprehension for GORT, which utilizes a multiple-choice format, these observations suggest that the students’ expressive abilities did not keep pace with their growth in receptive reading comprehension. This is supported by the persistent difficulty that students experienced responding to the second, short-answer question posed for each QuickReads® instructional passage, compared with the first, multiple-choice question (see Instructional Decisions, Chapter 4).

Since the administrator and scoring procedures for accuracy were the same for CBM and GORT, the explanation for these puzzling results most likely lies with differing task requirements and/or differences in passage content. Curriculum Based Measurement texts were short, like GORT passages, but were exclusively informational, while GORT mixes informational texts and story passages. Some CBM texts were built on concepts and vocabulary from earlier texts in the same QuickReads® unit and may have introduced unevenness in familiarity, as noted in Chapter 4. There was unevenness in familiarity for GORT passages as well, but for a different reason, also noted in Chapter 4. Unlike the

GORT, CBM texts included a captioned photo and unit title as well as a passage title, and students were encouraged to use them to predict out loud before reading for CBM scoring. The GORT Rate is based on total time and words read, which surpassed 2 minutes for some students on later passages, whereas the CBM rate is based only on the words read in the first minute. If some students' reading stamina flagged during the latter part of GORT passages, this could account for slower GORT rates relative to CBM rates. Occasionally, the researcher's anecdotal notes do remark on differences in pace for the first and second halves of a GORT passage. The QuickReads® passages used for CBM, while carefully constructed for developmental control of vocabulary, have not been normed for use in reading assessment. The strength of CBM lies in its ability to track incremental growth over long periods of time, months rather than weeks (Deno & Marston, 2006; see Appendix E); the average number of CBM readings used in the study was only six, not nine as planned, due to missed weeks and changes in instructional levels after Week 2. Therefore, the GORT measurements are considered by this researcher to be the more reliable measure of growth in the students' oral reading fluency. Curriculum Based Measurement readings may have provided more useful information if they had been made over a longer time period. Even the most carefully chosen CBM materials cannot be expected to be perfectly graduated in difficulty, and CBM probes typically fluctuate (see Appendix F). This type of data may be sensitive to real changes in reading ability only over a much longer time frame than 7 or 8 weeks.

Overall, perhaps the study was overly ambitious for its short duration. In any event, it involved a panoply of variables that could not be precisely measured using the selected instruments, leading to a great deal of conjecture. Since variability of texts used for

assessment is argued to contribute much to this guesswork, use of the same passages for pre- and posttesting, either from an informal reading inventory (IRI) that accounts for content familiarity or from only one of the GORT forms, would have been preferable. Though a practice effect might have come into play, 9 weeks between first and second reads would have helped mitigate that.

### **LESSONS LEARNED: RECOMMENDATIONS AND DIRECTIONS**

The lessons learned from this formative experiment are presented in 10 sections, within which tentative recommendations for classroom practice and further research are made.

1. An Unexpected Role for Accuracy
2. Comprehension: The Key Player
3. Potential for Prosody
4. Testing Instruments
5. Instructional Reading Levels for English Language Learners
6. Teaching Environment
7. Type of Instruction
8. Participant Diversity
9. Limitations of Formative Study
10. Competing Instruction

#### **An Unexpected Role for Accuracy**

“You have to say the words right.” The student who shared this, the class’s only idea about reading fluency on the first day of instruction, was prescient. One of the strongest findings of the experiment is an increase in word-reading accuracy on unpracticed text for many students, over the 9 weeks of the intervention. This is especially striking because *Accuracy* was one element of reading fluency that was left off the first-day instructional chart of fluency attributes, apparently unconsciously. The researcher and teacher were so

determined not to state the obvious (that you have to say the words right!), to correct the prevailing bias that fluency is “barking at print” (Samuels, 2007) and to challenge anecdotal impressions of ELLs as “word callers,” that they systematically undervalued the contribution of accuracy to fluent reading that includes comprehension. This bias in planning was overridden, however, by the development of individual coaching during weekly CBM sessions, in which one or two strategies for word accuracy became regular points of brief instruction for many students. Since the contact time for these interactions around word accuracy probably amounted to a total of 30 minutes for any one student over 9 weeks, compared with 37 hours in the class, they nevertheless weaken any claim that the planned interventions, QuickReads® and performance reading, were by themselves responsible for accuracy improvement, since specific suggestions made and briefly practiced during individual sessions may have been attended to by the student during reading at other times, including QuickReads® and performance reading. The decision to include this brief, individualized instruction was an outcome of the formative nature of the study, responding to the needs of the students. However, it does confound the determination of outcomes for the planned intervention components. The discovery that six students had been concurrently practicing some English reading with a special computer program, and subsequently demonstrated greater gains in GORT-4 Comprehension than the other 11 students, further undermines any claims for the efficiency of repeated reading alone, for this study.

Systematic decoding issues were still evident for the third through sixth graders in the study. Younger students had challenges with common within-word vowel patterns, and most of the older students had ineffective strategies for decoding long words. There was no evidence of “word calling” for these Intermediate ELLs, though a few students read rapidly

enough at the outset that it required several replays of their oral readings to locate all the miscues. Rapid reading with an accent may “disguise” subtler miscues, such as dropped word endings, and reflect a basis for the “word calling” phenomenon that educators attribute anecdotally to many ELLs. Such students may appear to be reading accurately; careful miscue analysis, at a level that is likely to be impractical for classroom teachers, may show otherwise. “Word calling” is a real phenomenon (Perfetti et al., 2008) and some ELLs at higher levels of proficiency might turn out to have true “word calling” patterns.

### **Comprehension: The Key Player**

How much value did the 17 students in this study place on understanding what they read? Comprehension of unfamiliar passages improved for most students after 9 weeks of intervention, but the gains are not strongly related to growth in fluency indicators for the same passages, as measured by GORT. Kuhn and Stahl’s (2004) review of 33 repeated-reading studies found that, generally, where there was an increase in rate and accuracy (WCPM) there was also an increase in comprehension; however, measures of comprehension in these studies were mostly for micro-comprehension, at the sentence level, not macro-comprehension of whole passages. The strongest claim that can be made for this study is that, for the students who gained in Comprehension, two-thirds showed gains in Accuracy and one-third showed gains in Rate. However, three students who gained in Accuracy showed no gains in Comprehension, and three who gained in Comprehension showed no gains in either fluency marker. Comprehension is a complex construct with multiple variables (RAND Reading Study Group, 2002) and, while it is likely that improvements in Accuracy and Rate constituted an advantage for some, it is clear that more was at work. The



prereading comprehension strategies relating picture, title, and caption that the students practiced during the QuickReads® routine were not as applicable to the GORT passages (which had a title but no picture and no caption), and no other comprehension strategies were taught directly. What then can account for it?

There is little to be gleaned from existing research on English reading comprehension among ELLs beyond the certain knowledge that reading comprehension is a significant challenge for language minority (LM) children in general (Lesaux & Geva, 2008). The NLP review identifies six factors correlated with reading comprehension for LM children: readiness skills, word-level skills, background knowledge (content familiarity), motivation, SES status, and text attributes, but many of the studies did not describe the text or task used, limiting interpretation. Farnia's study (2006) suggests that oral language proficiency is a significant predictor of reading comprehension and that the rate of an ELL's text-reading fluency growth between Grades 4 and 6 predicts her reading comprehension at the end of Grade 6. However, neither of these is helpful for understanding the outcomes of this study, since the participants were at the same proficiency level and the study was short-term.

A parsimonious explanation, which cannot be verified, is a generalized practice effect: time on task (Goodlad, 1985) with reading materials demanding evidence of comprehension, alongside the advantages of reading texts repeatedly. In this view, the students may simply have done more reading of a type requiring focused attention to comprehension questions than they may have been previously accustomed to, and/or, the added time spent reading in their entire instructional day made a difference. The latter is exactly what instance theory (Logan, 1997) predicts: if one hears or reads a specific word, phrase, or common phrase structure repeatedly, there is a greater probability of accessing a memory

trace for that feature automatically when the same or a similarly structured phrase is encountered in the future. This applies to both repeated reading of the same text and wide reading of similar text. O'Connor and colleagues (2007) found that students in both repeated-reading and "continuous-reading" conditions showed greater growth on reading rate and comprehension than control students; they concluded that practice reading aloud with corrective feedback was more important than the specific model of practice.

In a meta-cognitive sense, with the tracking of their success with QuickReads® questions and as an audience for performance reading, the intervention may have primed the students for comprehension and they may have come to value it more. Metacognitive self-monitoring skills improve with practice and can become automatic, contributing to fluency (Samuels, 2006).

Another possibility is that some students increased their general reading vocabulary enough to make a difference, an explicit intent of the QuickReads® program, consistent with automaticity theory (LaBerge & Samuels, 1974), instance theory (Logan, 1997), and Hogaboam and Perfetti's (1978) demonstration that skilled comprehenders have faster automatic word-recognition skills than less skilled comprehenders.

Other possibilities include contributions from prosody, such as improved phrasing. For each of the four prosodic elements, three-fourths of the students made gains. If Rasinski (2000) is right, and the phrase, not the word, is the natural unit of meaning in reading, then prosodic development should enhance comprehension. Instance theory (Logan, 1997) provides a mechanism, episodic memory, that may explain the learning of prosodic as well as visual (print) structures. In Miller and Schwanenflugel's (2006) study of primary-grade children, prosody had an independent effect on comprehension when the text was composed

of complex sentence structures. QuickReads® texts, even at Level A, do include a high percentage of complex sentences. For example, page 27, pulled at random from Book 1 at Level A, contains eight sentences, six of which are complex.

While it is impossible to know with any certainty, from this study, the relative contributions from prosody, reading vocabulary, rate, accuracy, or meta-cognitive valuation of comprehension, the important finding is that, for some of these 17 students, 9 weeks of reading intervention based on repeated reading, without direct teaching of comprehension strategies other than an independent text preview and brief table discussion adapted to the QuickReads® protocol, appears to have contributed positively to reading comprehension of unfamiliar passages. These results mirror the mixed results of decades of repeated reading research with native English speakers (Kuhn & Stahl, 2004): repeated reading benefits some students some of the time, enough to remain a practice of practical and research interest but frequently not enough to claim large effect sizes. The augmented approach of FORI, in which the benefits of repeated reading are strengthened by instruction for comprehension of the texts, has demonstrated superior results for native English speakers (Kuhn et al., 2006; Stahl & Heubach, 2005) but has not been done with Intermediate ELLs (M. R. Kuhn, personal communication, March 20, 2008; P. J. Schwanenflugel, personal communication, March 28, 2008). The addition of the graduated vocabulary curriculum imbedded in QuickReads® texts was an attractive, shorter-term alternative, which addressed the language needs of ELLs. In this study, however, a great deal of attention to the importance of comprehension, if not instruction in actual strategies for comprehension or extensive meaning making of texts with students, was an obvious need for the students, above and beyond the scaffolding provided by the texts themselves.

Within the QuickReads® routine, the review questions were not optimally used for the benefit of the students' learning, and there is no feedback mechanism provided in the published protocol (Figure1). The feedback used by the researcher, visual markings in the student workbook, without dedicated reflection time for the student, was almost certainly insufficient to have resulted in real learning. The comprehension questions were primarily of value for student accountability and for formative assessment by the researcher.

Opportunities for the students to learn from their mistakes with these questions would have amounted to explicit comprehension instruction, along the lines of Question-Answer Relationships (Raphael, 1982, 1986), but might have been more generative.

Among educators in general, the label "scaffold" may mean any simplification of curriculum predicted to allow a learner access to more complex learning. While we adapted the QuickReads® protocol to include one exercise in which students work together to negotiate text meaning, it seems evident that Hiebert (2002b, 2003a) considers the structure of the texts themselves to be the primary scaffold, in a sense taking the role of instructor. Cummins (2003) maintains that comprehensible texts are necessary and significant inputs for ELLs to acquire academic language. However, Vygotsky (1978) maintained that learning in a child's ZPD is always *socially* mediated; if the text "scaffolds" used in this study were correctly applied and many students still failed to learn the content of the texts after reading them repeatedly, it suggests that socially-mediated learning interactions were insufficient. The point is not to devalue the texts or the repeated reading method but to admit that, in and of themselves, in the absence of skillfully orchestrated social learning, they may not work well for ELLs. From this viewpoint, disparity in the reading improvement of different students could be explained by the degree to which each student was able to become her own

instructor, using “inner speech” to mediate the challenges in the texts (van Lier, 1996). This, of course, is also a possibility for English speakers using repeated reading methods.

At any rate, the avowed intent of this research was not to pinpoint the mechanism of fluency practice to reading improvement (since several mechanisms were provided for) but to demonstrate that fluency practice has potential for use with students of Intermediate English proficiency. The intervention seems to have made a difference for some students, but there are questions about whether the social learning environment was generative for all, and there were practices that competed with the repeated reading effects, from a research point of view, and weakened a stronger conclusion.

### **Potential for Prosody**

“Does it sound right?” is one of the mantras of the primary-grade reading teacher. But if the *Intermediate ELL* does not know how it is supposed to sound, how can this meta-cognition be a guide to successful reading? Clearly, “sounding right” applies toward more than the accurate pronunciation of individual words. After 7 weeks of performance reading that emphasized various prosodic contributions to oral reading fluency, these 17 students were “using and confusing” the various prosodic skills demanded of them, in particular, which words to emphasize and the natural phrasing provided by punctuation. In addition, there is anecdotal evidence of changes in expressive markers that were not taught directly, particularly toward more natural, or native-like, pitch changes at the end of sentences. The degree to which students were still “using and confusing” their new prosodic knowledge suggests that the time frame for mastery is longer than 7 weeks, the duration of the performance-reading portion of the intervention. As prosodic reading appears to contribute

significantly to comprehension (Daane et al., 2005; Pinnell et al., 1995), then giving ELLs the opportunity to approximate the prosodic reading of mature readers may be one key to the persistent problem of poor comprehension. Performance reading works against the characterization of “word calling,” because the student learns to recognize larger cognitive chunks and internalize phrase and sentence structures not as available in the truncated speak of everyday English. Instance theory (Logan, 1997) provides a theoretical mechanism that explains the automatic retrieval of larger language structures, which almost certainly contain prosodic components, since all skilled readers process reading phonologically (Perfetti, 1995). Automaticity theory (LaBerge & Samuels, 1974), with its bottom up, stimulus-response mechanism, has a harder time explaining automaticity involving greater language complexity (Logan, 1997).

This study demonstrates that repeated reading for performance is feasible for ELLs at the upper elementary grades, that it was more motivating for them than the type of repeated reading practice delivered by the QuickReads® protocol, and that their receptive comprehension of unfamiliar nonfiction passages improved during an intervention that included performance reading of such passages. Engagement with performance reading was predicted by decades of practitioner research done with elementary students whose language status is largely unreported (e.g., Corcoran & Davis, 2005; Griffith & Rasinski, 2004; Martinez et al., 1999; Rasinski, 2008).

There is some suggestion, however, that the performance reading did not benefit the third graders in this study, at least in terms of prosodic development; younger ELLs may need more time to acquire basic reading skills before they can attend well to prosodic demands of performance reading, although performance practice may benefit their word-recognition rate

and accuracy independent of smooth and expressive reading. Another possibility is that the social learning environment, expecting young students to perform in front of, or with, students 1 to 3 years older, was inhibiting for them, raising their affective filter (Krashen, 1982b). The decision to include four grades of students in one classroom addressed recruitment limitations, including concerns for least impact on the students' instructional day, but cannot be recommended as a model for school or research practice. As the formative experiment is a study model closely related to the way real teachers make instructional decisions in real classrooms, this is a weakness of the study.

### **Testing Instruments**

As discussed above, the researchers' experience with the Multidimensional Fluency Rubric (MFR) suggests that, for research purposes, a more precise fluency rubric or algorithm is needed. With the development of digital technologies, multidimensional software tools may be developed that will utilize wave-form measurements to assess prosodic reading, perhaps with an algorithm that measures the "match" between the child's reading and that of one or more skilled readers (e.g., Cowie et al., 2002). Language-learning programs such as Rosetta Stone® do this for shorter utterances and Adams (2006) utilized voice-recognition features for QuickReads® technology version.

In the meantime, several questions are raised about using fluency rubrics for research. For the students in this study, a separation of Volume and Expression, combined in the MFR, would have simplified scoring, as Volume was not highly variable during individual testing. Volume did come into play during performance reading, but the rubric was not used to score performance fluency. Expression itself is multidimensional, and there is strong overlap with

Phrasing. Students who read in longer phrases, and phrased more naturally, were scored as more Expressive. Observing punctuation, particularly the rise or drop in pitch at the end of a sentence, also corresponds highly with Expression. These features could be separated out on a fluency rubric designed for prosodic reading research. A great deal of overlap was also observed between the Smoothness and Pace and the Smoothness and Phrasing dimensions. What do we mean by “pace”? Is it the background pace for the passage, the pace at which most of the passage is read, against which slowdowns may occur for challenging parts, slowdowns that might be captured by Smoothness, or is it an overall blending of the varying rates at which portions of the passage are read, that would be reflected in words-per-minute? Furthermore, Smoothness is usually a combination of phrasing and repetition, so why not separate these components as well? Neither the student who reads in short choppy phrases, nor the student who reads in longer more natural phrases but repeats a lot, are reading smoothly. The rubric, therefore, has heuristic value for teachers and students but creates confusion for researchers who need to be fair and accurate in their scoring. The recommendation from this study is that researchers who wish to measure the multiple dimensions of oral reading fluency construct a somewhat more detailed rubric with the following dimensions: Volume, Phrase Length, Phrasing (incorporating pausing and pitch changes with punctuation), Natural Word Emphasis, Dramatic Intonation, Background Pace, Repetition. Phrasing could be further scored as Pausing (for punctuation) and Natural Pitch Changes (at punctuation). Although teachers would never be expected to make use of such a fine-tuned tool, researchers could.



### **Instructional Reading Levels for English Language Learners**

Instructional reading levels for some of the ELLs were overstated initially, and adjustments had to be made. Dropped word endings, in particular, were difficult to pick up on a single hearing, and may have contributed to underscoring of miscues on the QuickReads® placement passages. The researcher is also reasonably certain that, in these initial readings for placement, she discounted some miscues as “accent” when a child was actually quite capable, but unaware, of accurate pronunciation. Careful recording and multiple playbacks were essential to make accurate judgments about miscues for the pretest, posttest, and CBM readings, but the placement readings were not listened to repeatedly. Since this level of attention to word-recognition is not practical for classroom teachers, it may be more productive overall, in the case of Intermediate ELLs, for teachers to deliberately understate instructional levels from the beginning, or at least weight them more heavily on comprehension than on rate and accuracy. This is not to say that ELLs are “word callers,” but to acknowledge the relative difficulty any second language learner probably has with whole-text comprehension, compared with word accuracy, at intermediate stages of proficiency. This idea is consistent with literature that suggests that reading comprehension is more of a challenge for ELLs than word-reading accuracy, particularly at earlier grades (Farnia, 2006; Lesaux & Geva, 2008).

When degree of comprehension was unclear during the placement assessments, the researcher allowed for look-backs to make a decision. In so doing, the functional comprehension levels for the students in this study may have been systematically overstated, as they had to be adjusted downward for half of the students after Week 2. This begs the

question: If repeated-reading instruction were to continue all year, as in a typical FORI study, would the use of grade-level texts associated with these studies be productive for ELLs at intermediate levels of language proficiency? This is a key question for future research since FORI instruction, while successful with many English speakers, makes use of grade-level basal reading materials, not instructional level texts (Huxley, 2006; Kuhn et al., 2006; Stahl & Heubach, 2005).

The familiarity of passage content is an important factor in reading comprehension that generalizes to English speakers (Goldenberg, 2008) as well as ELLs (Lesaux & Geva, 2008). GORT-4 has no built-in mechanism for evaluating passage familiarity, unlike some informal reading inventories such as the Qualitative Reading Inventory®. The pairs of passages used to evaluate prosodic reading were judged to be unequal in familiarity for the children in the study, complicating any determination of growth.

### **Teaching Environment**

The inclusion of students at four grade levels almost certainly did not provide the best social environment for the youngest or the oldest students. Resistance was overt from some of the older students and implicit in the relative lack of improvement for the third graders, at least in the dimension of prosody. There is also an implication that school-wide expectations for cooperative social learning, structures for listening and talking accountably, were not well established in the classrooms in which the children spent the majority of their day. Since no study was made of the children's habits inside their home classrooms, this remains conjecture. Cross-observations of the children in their classrooms during reading instruction would have strengthened this study.

As day-to-day instruction was designed and delivered primarily by the researcher, there is also a lack of observational evidence as to the effects of the teachers' behaviors on classroom outcomes. The co-teacher made valuable suggestions for curricular changes but few constructive criticisms of the researcher as teacher, other than the suggestion in Week 6 that perhaps she was speaking too fast during whole-class sessions for all students to follow—certainly a critical observation! More of such observations might have allowed for better outcomes, if they had been systematically designed into the intervention. The role of the researcher in a formative experiment, with the separation of teaching and observing roles, is further discussed below.

### **Type of Instruction**

Timed readings during instruction were deemed counter-productive for some of the study participants and were abandoned. Early observations from this study support the claim that timing readings can encourage fast reading without comprehension, unless they are introduced and monitored with great care. One rationale for including them is that they can provide visual evidence of improvement and thus serve as a motivator for a practice that might otherwise seem tedious to students. However, as neither the CBM rates and accuracy measures nor the self-timed rates charted by these ELLs during the first 2 weeks showed steady inclines, it was thought that inconsistent timings from day to day might tempt some children to read faster without naturalness or accuracy. Timed reading protocols that include a check on accuracy, by a second-party observer such as a partner or recording computer, are probably a better choice. However, given the caution about miscue analysis argued above, for students similar to those in the study it is dubious that a peer partner would detect miscues

with a useful degree of accuracy. On the other hand, accuracy feedback may be just the sort of role that a computer can play to advantage. Language-learning programs such as Rosetta Stone® utilize such features. Adams (2006) used voice recognition software in conjunction with QuickReads® technology version, which also has voice-recognition features, to produce superior reading-fluency gains for students in Grades 2 through 5, over matched controls; 15% of these students were reported to speak English as their second language. Fluency-based reading software that uses accuracy feedback in conjunction with timed readings might better train students to stay within an instructional-level “zone,” speeding up when they are accurate and slowing down when they are inaccurate. As a low-tech option for the ordinary classroom teacher with many students, timed readings of “cold” texts, for which vocabulary and content understanding have not been thoroughly developed, are not recommended for ELLs of intermediate proficiency. In the year following the study, the researcher also delivered a district-mandated commercial reading intervention with a repeated-reading component to groups of fourth, fifth, and sixth grade students, mostly ELLs, including some of the children in the study. In this program, key vocabulary is taught and concepts are discussed during silent and shared readings, *before* peer-monitored 1-minute readings by the students. Using her experience from the study, the researcher emphasized phrasing and punctuation during choral readings and was able to tell students with confidence when they were reading too fast and needed to slow down. The lesson learned for this researcher is: build comprehension first, with fluent oral reading to follow, as might be expected in a FORI model.

Repeated reading with the ELLs in this study required strong, consistent efforts to emphasize the comprehension component of fluency. Instruction that balanced repeated

reading with comprehension strategies taught directly might have been more productive, and could be accommodated within a FORI model, keeping in mind the cautions made above about instructional-level texts. It is evident from this experiment that for this group of students some sort of comprehension scaffolding was essential for repeated readings to result in sufficient learning from informational text. The most promising course for the students in this study was the direct preteaching of concepts, a decision that was made late in the intervention. How to make concept preview a true scaffold, a support that is gradually released, is an important consideration. It is generally acknowledged that, as a support for learning content, concept preview (and content preview-review in the students' L1, in particular) is a valuable practice (Goldenberg, 2008). For ELLs just beginning to read, vocabulary instruction that emphasized semantic relations had larger effects on reading comprehension than vocabulary instruction that emphasized morphological awareness (Filipini, 2007).

However, if a student is to learn from texts themselves, the purpose for which the QuickReads® texts were designed and which Cummins (2003) advocates, at some point she must independently grapple with the information presented. Although a lesson was designed to teach the students explicitly how informational texts teach new vocabulary, it was introduced during the final week of the intervention and was neither completed nor capable, at that point, of being developed. For the population in this study, either the vocabulary scaffolding provided by the texts used in the intervention was insufficient, in and of itself, to support comprehension, or the procedures for establishing instructional levels did not result in correct placement in the texts. Since several of the students were already in the lowest texts offered, a systematic lowering of placements would have eliminated them from the

study. These were third graders, and coupled with poor outcomes for their prosodic reading growth, a case may be made that this intervention as designed was suitable for the fourth through sixth graders, but not for the third graders.

Other approaches for introducing texts, to gain students' interest, might also have been used with better effect, but were impractical for the variety of groups and levels requiring instruction. If comprehension supports are acknowledged as important for fluency-based instruction for ELLs, then the management of groups and levels becomes critically important. A model that expects one teacher to accommodate a wide variety of reading levels cannot be recommended. Again, this difficulty could be surmounted by sharing fluency instruction among several teachers, or with the use of fluency-based reading software that either integrates comprehension supports or frees the teacher from monitoring the repeated-reading protocol to focus on meaningful text introductions and individual assessments. Some reading software, such as READ 180®, which is not a fluency-based program, couples computer-delivered instruction with face-to-face group instruction by a teacher. The teacher can accommodate several levels in rotation, with the computer acting as second and third instructor for various activities. Adams (2006) argued for the necessity of one-on-one reading instruction for beginning and struggling readers and the promise of automatic speech recognition software to provide it. She helped build automatic speech recognition features into QuickReads® technology version, which was not considered for this study because there was not adequate technological support for it at the study site; in hindsight, it may have been the better choice for this complex classroom configuration. Researchers at the University of Nebraska (Trainin, Wilson, Hayden, & Erickson, 2009) found both QuickReads® print and technology versions to produce superior gains in reading

fluency, vocabulary, and comprehension over a district fluency curriculum, for students in Grades 2 through 5, with no achievement advantage for the technology version over the print version.

It may also be that a longer time frame than 9 weeks is needed for ELLs to accomplish the goals of increased fluency with comprehension, given the struggle these students exhibited with a fairly literal level of comprehension. Categorical abstractions were confusing for them, particularly the youngest students. For instance, a Level B passage about George Washington Carver discusses the various *uses* of peanut plants, but the third graders who read it, repeatedly and consistently reported it was about different *types* of peanut plants, not different uses for peanut plants. Fluency Oriented Reading Instruction, which is integrated into regular classroom instruction and typically implemented over a school year, may be a better option for intermediate-level ELLs than a few months of supplemental fluency-based instruction. The weeklong exploration of a text, or related texts, typical of FORI, is more likely to provide the sorts of comprehension scaffolds that would make a difference for these children. The critical difference for FORI instruction, as reported in the literature, is that FORI uses one level of text for all students, grade level, and this may not work well for intermediate-level ELLs.

For the students in this study, repeated reading of short nonfiction for performance appears to have been much more motivating than repeated reading of short nonfiction to answer comprehension questions; if repeated reading with comprehension can be accommodated within a performance model, such an approach is recommended for ELLs. A combined approach was briefly explored within the final 3 weeks of the class, following posttests. However, for the ELLs during the main part of this study, performance had to be

strongly and explicitly associated with comprehension to be meaningful for audiences.

Video recording and playback of the students' performances was strongly motivating and educational for the student, with no obvious signs of distress or misgiving from any student, and it could have been introduced much sooner. Is it possible that the widespread caution about negative affective filter (Krashen, 1982b) may discourage teachers from making direct corrections to the language of nonbeginners that are effective and appropriate for their proficiency level? The students in this study were eager to improve their reading performances once they saw and heard themselves on video, which flies in the face of advice about putting language learners on the spot and shutting them down affectively. Perhaps the current culture, of instant digital imaging and social networking, is changing the way children, including ELLs, are willing to learn.

### **Participant Diversity**

The 17 ELLs in this study had differing needs and challenges, even within the narrow parameters allowed for inclusion. Some of these included speech impairment or reading disability not related to language status. It is recommended that future reading fluency research with ELLs systematically account for such differences. Speech impairment, in particular, makes it difficult for scorers to make decisions about miscues.

The study students, for the most part, were compliant and labored to take on what was taught. Sometimes they misinterpreted teacher instructions in ways that resulted in unanticipated awkward expressions, if the instructors were not highly conscious of the reason for every teaching move and how it was introduced. The most blatant example was



single-word emphasis for meaningful expression, a seemingly simple idea that turned out to be challenging to teach.

In general, the students' classroom listening skills were poor. This showed itself during the vocabulary/key concepts preview and during performances. Fluency lessons had to be brief, and the highly interactive oral exercises engaged the children the most. It appeared that the children were not practiced at pair or group sharing or in listening to one another. As the intervention was tightly "sandwiched" between two month-long school breaks, the teacher-researchers relied on their familiarity with the students to launch headlong into the curriculum without building community or training the children in procedures for accountable talk. In hindsight, they agree that a week of tightly planned, briskly paced pair-share and group sharing activities related to performance and QuickReads® procedures would have been a useful investment of time. Overall, socially-mediated learning interactions may have been insufficient to produce the desired learning, as discussed above.

### **Limitations of Formative Study**

In addition to weaknesses of the study's design and implementation acknowledged above, further structural limitations are noted. The most obvious is that outcomes of a formative experiment cannot be generalized and serve only to raise questions and provide suggestions for further research. This, of course, was acknowledged going into the study. Furthermore, formative experiments typically involve a larger research team, in which the roles of researcher and teacher are more separated, while allowing for frequent interaction for making formative decisions (Reinking & Bradley, 2008). The dual roles of the researcher in this study, to facilitate a complex daily intervention and make daily observations, resulted in

a heavily teacher-centered narrative. Greater separation of the researcher and classroom instructor roles might have allowed for a finer set of observations, of both teachers and students, from which an alternate set of instructional decisions might have emerged. While the narrative captures the complexity and multi-layered texture of classroom research, the experiment might have been more generative if such separation had been made.

### **Competing Instruction**

Six of the 17 students also participated in a computer-based language intervention, as detailed in Chapter 4 (see Table 13). All six students (100%) made gains in Accuracy and Comprehension on the GORT, compared to 65% and 71% for the study group as a whole, inclusive of these six. Of the other 11 students in the fluency intervention, 5 (45%) made gains in Accuracy and 6 (55%) in Comprehension, a far more modest claim. Almost certainly, concurrent participation in the language program contributed significantly to the reading gains for the six students enrolled. How much of the effect can be attributed to either intervention, or to a synergy of the two, is speculative, but may help explain the focus of many students on word-level reading. The students spent far less time in the language program (an average of just over 10 hours compared to a total of 37 hours in the fluency intervention program), and this instruction was broader in scope, incorporating listening and speaking as well as components of reading. However, the language instruction was focused one-on-one and precisely adjusted to each student's changing needs. This finding, unplanned and unexpected, suggests that one-on-one English language instruction, digitally delivered, may be a powerful adjunct to reading instruction (perhaps each to the other) and that the best approach to the reading achievement of intermediate-level ELLs may well be a thoughtfully

orchestrated, multi-pronged approach that utilizes the natural advantages of computer-delivered instruction for repetition and dynamic evaluation. Arguments for digital automation of the repetitive components of repeated-reading instruction were made in the previous section, potentially freeing the classroom teacher to facilitate performance reading and social meaning making about texts.

A controlled experiment to compare broad-based, computer-delivered English language instruction, fluency-based reading intervention(s), and a combination of the two would be an obvious next step for research. English language learners of Intermediate proficiency should also be included in FORI studies. In addition, fluency-based reading intervention based primarily on performance reading for video production appears to be a productive avenue for research.

## **RECOMMENDATIONS AND DIRECTIONS FOR RESEARCH**

“Lessons learned” from this study are interpreted for researchers as a summary list of 17 cautions and recommendations and a hypothetical redesign of the study.

### **Summary of Cautions and Recommendations**

All references to students in the following cautions and recommendations are for upper-elementary ELLs of Intermediate proficiency. These suggestions are highly provisional, based on this one pedagogical experiment with 17 students.

1. Explicit attention to features of words is a continuing need for Intermediate ELLs. Careful miscue analysis, at a level that may be impractical for classroom teachers, suggests that “word calling” does not accurately describe these learners. At this stage, a relatively small amount of such attention, particularly if it can be tailored to the individual, might result in significant gains.

2. If comprehension questions following repeated reading are used as formative assessments, they might have greater value if there is a mechanism to provide feedback and substantive reflection for the student.
3. Repeated reading of informational texts for performance is more engaging for Intermediate ELLs than repeated reading of such texts to answer comprehension questions. Video playback of reading performances shows great potential for engagement and is deserving of study.
4. Younger ELLs (third graders, in this study) may need more time to acquire basic reading skills before they can attend well to prosodic demands of performance reading; if performance reading is undertaken with younger students, it is recommended that they work exclusively with age peers.
5. The Multidimensional Fluency Rubric may be a valuable pedagogical tool but can be problematic for research on oral reading fluency. A more fine-grained rubric, replacement of component scores with counts for specific behaviors, or digital matching of reading behaviors with those of a skilled reader are considered more precise for research.
6. Teachers and researchers need to be cautious about interpreting “instructional” levels for repeated-reading texts used with ELLs. Unless repeated reading is done with significant comprehension scaffolds, such as preview of concepts, the texts ELLs use ought to be close to their independent level. During placement, particular attention should be paid to the student’s ability to comprehend what she has read, with and without the opportunity to re-read.
7. Intermediate ELLs ought to be included in year-long FORI studies, to see if the demands of “instructional” or “frustration” grade-level texts typically used in such instruction can be met.
8. Use of the same texts for pre- and postassessment, with sufficient passage of time between tests, may be preferable for assessing reading improvement in Intermediate ELLs, as it avoids the problems of uneven content familiarity and makes it easier to contrast prosodic features of the reading.
9. Timed readings of “cold” texts, for which vocabulary and content understanding have not been thoroughly developed, are not recommended for Intermediate ELLs, even if the texts have been read more than once.
10. It is unlikely that repeated reading by itself, without significant expectation and scaffolding for comprehension, can accelerate the reading achievement of Intermediate ELLs. An instructional model that systematically places repeated reading within a broader framework of making meaning from texts is preferable.

11. Intermediate ELLs need to be taught explicitly how informational texts can teach new vocabulary. For many, it is probably not sufficient to have them read text with the new vocabulary repeatedly.
12. Future reading-fluency research with ELLs might systematically account for reading difficulties not primarily attributable to learning a second language; Intermediate ELLs who are not progressing well in English over several years are at risk for underlying reading disability not related to learning the second language.
13. Computer-delivered instruction could be a significant component of fluency-based reading instruction, utilizing the computer's natural advantage for repetition and dynamic evaluation, freeing the classroom teacher to facilitate performance reading and social meaning making about texts.
14. Prosodic readings that approximate those of a native speaker are not to be expected within a short period of intervention such as 7 weeks; the value of prosodic practice is likely to manifest over much longer periods of consistent practice, such as within a year-long FORI design or with regular performance reading throughout the school year, as in Griffith and Rasinki's study (2004).
15. Greater separation of instruction and research/observation roles might prove more generative for the formative experiment.
16. Learning the oral cadences of words, phrases, and sentences in a new language is likely a protracted and highly mimetic process. Intermediate ELLs do their best to mimic what they hear. Reading instructors need to be sensitive and proactive about how they introduce features of oral reading for performance, such as syllable stress and word emphasis. Carefully planned scaffolds for practicing oral language features, such as brief, focused passages, are engaging and supportive for Intermediate ELLs.
17. One-on-one, broad-based English language instruction, digitally delivered, may be superior to, or a powerful adjunct to, fluency-based reading instruction; various combinations for intervention might be tested in controlled studies.

### **A Re-Designed Study**

The recommendations from this researcher, if she were to repeat this experiment, would be to redesign the study as follows.

## **PARTICIPANTS**

Include participants from fewer grades, probably no more than two, and definitely not third grade. If the class is a pull-out class, include all students in the study, if possible. Otherwise, do the program with an entire classroom or classrooms and monitor the ELLs for data, both qualitative and quantitative. Exclude special learners or report on them separately. Exclude speech impaired students. Make certain what other programs the children are simultaneously enrolled in that could offset results from the study.

## **FORMATIVE RESEARCH ROLES**

Have classroom teachers deliver the instruction as part of a formative research team, so that individual teaching and student behaviors can be more closely observed and considered by the researcher and the narrative made more student-centered. Include entrance and exit interviews with students.

## **PLACEMENT**

Place participants in QuickReads® texts closer to their independent reading levels, to facilitate whole-text comprehension. Make sure placements are done with great care to both *miscuing and comprehension*.

## **REPEATED-READING INSTRUCTION**

Deliver QuickReads® texts digitally, following a concept preview for each passage. Explicitly teach participants how informational texts can teach new vocabulary. Rather than suspending timing of passages, be forthright with specific students when they are reading too fast to be phrasing and expressing (and thus comprehending) well. Use a rotational, small-

group structure: instruct small groups and have groups practice for performance while other groups of students are doing repeated reading with the QuickReads® computer program. Time the readings weekly and share the charted results with the students, explaining why rate might drop when attention is being paid to improving other aspects of reading.

## **PERFORMANCE READING**

Create more opportunities for children to practice specific oral-reading skills together or in front of the class. Design performance lessons to be more reflective. Have skilled peer readers record reading performances to be used instructionally in class. Use video recording and feedback much sooner. Introduce audience learning from the start as a barometer of the excellence of the performance.

## **SOCIAL LEARNING**

Spend more time up front teaching students the specific demands of social learning structures, such as pair-share and group consensus.

## **ASSESSMENT**

Have students read the same passages pre- and poststudy. Use either an IRI that accounts for text familiarity or use probing questions prior to GORT passages to rate the familiarity of the passages. Find corresponding-level passages in ancillary materials (little books) published by QuickReads® to use for CBM measurements and eliminate all coaching from these sessions.

The idea of reading an entire five-passage QuickReads® unit as one piece with a goal to perform it, working through the vocabulary and comprehension with the students before

performing, is attractive but begins to approximate a FORI model and diverges significantly from the experimental design here. This study demonstrated to this researcher, above all else, the need to make sure reading comprehension is kept in the foreground of reading instructional practices with ELLs of Intermediate proficiency.



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**APPENDIX A****FLUENCY CURRICULUM FOR QUICKREADS®**

## FLUENCY CURRICULUM FOR QUICKREADS®

### The QuickReads® Program at a Glance

	High-Frequency Words	Phonics Patterns	Projected Words Read Per Minute
<b>Level A</b> (2nd grade curriculum)	300 most-frequently-used words	Single-syllable words with regular short and long vowel patterns and consistent patterns	Book 1 80 words Book 2 90 words Book 3 100 words
<b>Level B</b> (2 <sup>nd</sup> grade curriculum)	500 most-frequently-used words	Single-syllable words with regular short and long vowel patterns, <i>r</i> -controlled vowels, and consistent spelling patterns	Book 1 90 words Book 2 100 words Book 3 110 words
<b>Level C</b> (3 <sup>rd</sup> grade curriculum)	1,000 most-frequently-used words	Vowel patterns in single-syllable words	Book 1 100 words Book 2 110 words Book 3 120 words
<b>Level D</b> (4 <sup>th</sup> grade curriculum)	1,000 most-frequently-used words	Multi-syllable words with inflected endings	Book 1 110 words Book 2 120 words Book 3 130 words
<b>Level E</b> (5th grade curriculum)	2,500 most-frequently-used words	Multi-syllable words with inflected endings	Book 1 120 words Book 2 130 words Book 3 140 words
<b>Level F</b> (6th grade curriculum)	5,000 most-frequently-used words	Multi-syllable words with inflected endings	Book 1 130 words Book 2 140 words Book 3 150 words

*Note.* Adapted from Carroll, J. B., Davies, P., & Richman, B. (1971). *Word frequency book*. Boston, MA: Houghton Mifflin; Zeno, S. M., Ivens, S. H., Millard, R. T., & Duvvuri, R. (1995). *The educator's word frequency guide*. New York, NY: Touchstone Applied Science Associates.

## **APPENDIX B**

### **INFORMED CONSENT AGREEMENT**

## INFORMED CONSENT AGREEMENT

### Carver Elementary School: Repeated Reading Study Parental Consent Agreement

You are being asked permission for your child to participate in a research study. Before you give your consent, it is important that you read the following information. Ask as many questions as necessary to be sure you understand what your child will be asked to do.

*Investigators:* Katharine Harrison

Literacy Resource Teacher, Carver Elementary School, San Diego Unified School District  
Doctoral Candidate, San Diego State University

*Purpose of the Study:* This study seeks to document how repeated reading works to improve the reading achievement of English language learners. Repeated reading techniques have been used successfully with native English speaking children.

*Description of Study:* Your child currently participates in daily instruction for English language development (ELD). During Trimester 2, January to April, daily ELD instruction will be based on repeated reading in English, at your child's developmental level. If you choose to allow your child to participate in the study, in addition to his/her normal ELD instruction, he/she will be asked to:

- Have his/her reading tested by reading short passages aloud and answering questions about them. This will be done once in January and once in April, for 30 to 60 minutes, in a private session.
- Participate in an oral reading test once a week, during ELD class time. Your child will read out loud, in private, for one to two minutes, from a short passage he/she has not read before.

Your child may also be observed by the researcher once or twice during regular classroom reading instruction. The researcher's notes will be used confidentially, for this study.

Your child will receive normal classroom instruction whether or not you allow him/her to participate in the study. If you allow your child to participate, results of the tests will be used confidentially, for this study. Your child's name will not be included on any of the tests or observations used for published documents.

*Risks and Discomforts:* If your child feels uncomfortable participating in any of these tests, he/she can stop at any time.

*Benefits of the Study:* The results of this study may be used to help teachers accelerate the English reading achievement of English language learners.



*Incentives:* As a thank you for your participation, you will receive a \$10 gift card sent to your home at the end of January.

*Voluntary Nature of Participation:* Participation in this study is voluntary. Your choice of whether or not you want your child to participate will not influence your future relations with San Diego State University, San Diego Unified School District, or Carver Elementary School. If you decide to participate, you are free to withdraw your consent and stop data collection on your child at any time, without penalty or loss of instructional benefits to you or your child.

*Questions:* If you have any questions about the research now, please ask. If you have any questions later about the research, you may contact Katharine Harrison, at Carver Elementary School: 619-583-7021 x3022. Or you may ask at the Carver Elementary School office to see Mrs. Harrison during any normal school day. If you have any questions regarding your rights as a human subject and participation in this study, you may contact the SDSU Institutional Review Board at 619-594-6622 or [irb@mail.sdsu.edu](mailto:irb@mail.sdsu.edu).

*Agreement:* The San Diego State University Institutional Review Board has approved this consent form, as signified by the Board's stamp. The consent form must be reviewed annually and expires on the date indicated on the stamp.

Your signature below indicates that you have read the information in this document and have had a chance to ask any questions you have about the study. Your signature also indicates that you agree to allow your child to be in the study and have been told that you can change your mind and withdraw your consent to participate at any time. You have been given a copy of this consent form. You have been told that by signing this consent form you are not giving up any of your legal rights.

\_\_\_\_\_  
Signature of Parent/Guardian of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Child (print)

## **APPENDIX C**

### **STAGE ONE DESCRIPTION OF STUDY SITE, 2008-2009**

## **STAGE ONE DESCRIPTION OF STUDY SITE, 2008-2009**

### **Academic Program**

Carver has four school-day and three after-school academic programs.

**School-day programs** include (1) combined Structured English Immersion (for English Language Learners) and Mainstream English Cluster (SEI/MEC) classrooms; due to a small student population, children in both programs are combined in most classrooms; (2) Special Day classes for some students with IEPs, and (3) Integrated Life Skills (ILS) classes for severely disabled children who are not diploma-bound. There is also a SEEC pre-school program for autistic children. Prior to this school year, there were also two 9- or 10-day Intersessions during the year-round vacation breaks in January and April. These were eliminated 2008-9 for budgetary reasons. The lowest performing students were previously invited to Intersessions, for which curriculum was provided by the district. Many of Carver's students were impacted by the cuts, as many neighborhood parents are unable/unwilling to transport their children to alternate sites still hosting Intersession. Carver's identified Gifted and Talented Education (GATE) students are served by GATE-certified teachers within a grade-level classroom that includes non-GATE students. The degree to which teachers use GATE curriculum and methods is uncertain. Since near-by Oak Park Elementary School has a full and separate GATE program, some Carver residents attend that school instead.

Academic after-school programs include (1) Prime-Time; (2) Arabic Language; and (3) Day Reading Program (EDRP) and/or Extended Day Math Program (EDMP). Prime-time has its own staff and functions as child care for working parents, between the hours of 6:00 to 7:20 and 2:15 to 6:00. A portion of the daily program is academic, an hour taught by Carver teachers and also includes homework time with adult assistance. This year Prime Time instruction utilized a packaged vocabulary program and a packaged read-aloud comprehension program, taught at three combined-grade levels. The remainder of Prime Time the children spend in structured play, non-structured but supervised play, and formal non-academic learning experiences such as dance, some contracted with outside agencies.

### **Literacy Practices**

#### **Units of Inquiry and Benchmark Assessments**

Regular day (non ILS/SEEC) classroom teachers currently follow grade-level Units of Inquiry authored by the district. The Units of Inquiry are an outgrowth of years of uneven development that began at many sites from a common curriculum "map" that, at first, was little more than a series of titles denoting different reading/writing genres and a list of "essential questions" to be applied to each genre. About 4 years after this initial impulse,

central-office staff, with help from selected teachers in the district, replaced the skeletal guidelines for these Units with a detailed day-to-day curriculum, to provide a resource for teachers that is aligned to district textbook adoptions and to create a common, sequenced curriculum for the district. Recent refinements also align the work with English Language Development standards and resources. Prevailing sentiment among veteran teachers at Carver is that the time they spent developing the site-based Units in earlier years amounted to curriculum writing and detracted from a focus on how to best deliver instruction. However, some teachers who invested time in developing robust units continue to draw on them heavily while attempting to align literacy instruction with the district's version of the Units and accompanying benchmark assessments. Current district units are comprehensive and contain much more material than teachers say they can actually use. Teachers who have learned to use them as resources, rather than precise day-to-day road maps, express satisfaction with them. Teachers who feel compelled to follow them to the letter and include all suggested instruction feel frustrated. This year, some teachers report that learning to use the Units more fully, to better prepare students for district Benchmark assessments, has preoccupied their thinking about their teaching and they have had to drop instructional materials and practices that they had previously used and valued.

The Units include regular informal assessments aligned with district-written Benchmark assessments, which had been partially implemented 2007-8, and Standards Based Report Cards, which were implemented at Carver this year. Benchmark data are reported to the district three to four times a year, depending on grade level, and made available online to teachers through the DataDirector system. This year, Carver has a DataDirector test scanner that reads and uploads test responses to the DataDirector server for immediate reporting and use by teachers to inform instruction and intervention. Teachers value the Benchmark data while acknowledging that aligning to Benchmarks "ties" them to the Units.

### **Instructional Delivery**

Delivery of literacy instruction varies from grade to grade and room to room. A majority of teachers were trained in the Reading and Writing Workshop models and practiced them for many years, at least superficially, and evidence of that practice remains in some of their scheduling of literacy activities, if not in their actual practice. In fact, the amount of direct instruction, skills-based instruction, and closely supervised practice has increased, so few if any teachers could be said to be supporting a true Reading or Writing Workshop with its characteristic openness to student choice, conferring by the teacher, and real independence of students over an extended time period daily. Specific, directed genre writing over short periods of time, as well as on-demand types of writing, are stressed in the Units. In truth, few teachers at Carver would have considered themselves successful in writing instruction prior to the district-written units and Carver's fourth graders score poorly on the STAR writing assessment; few are Proficient.

Most teachers pull small groups for reading and writing during independent reading and writing times, and are aided in this by various certificated support staff. A systematic

guided/small group reading program utilizing support staff was in place for 3 years but gave way this year to a far less restrictive version of intervention.

State scores increased during the first and third years of school-wide, coordinated guided reading but plummeted in the second year, when the defunct Westwood Charter School was assimilated one week before school opened, bringing with it teachers who were not trained in the literacy teaching methods of the district and students, most of whom were second language learners, many of whom had been home-schooled in their primary years, and who, as a group, demonstrated very low academic skills. However, it is not possible to attribute the increases in scores in the prior and subsequent years because every year has brought large population shifts of one kind or another. The first year of schoolwide guided reading, a substantial cohort of Carver's teachers and lower performing students were transferred to a new school in the students' neighborhood of residence. In the third year, most of the Westwood teachers left and many of the previous Westwood students found placement in other charters. A generally higher performing group of Muslim students appeared, attracted by Carver's after-school Arabic Language Program.

Instruction which targets reading fluency has not been implemented by any teachers at Carver in the previous four or more years until late 2007-8 when the Literacy Resource Teacher encouraged teachers to try it on and some primary teachers followed the call with Readers Theatre. This year, the fourth grade teacher experimented using Readers' Theatre in his Gold Rush social studies unit and his Magnetism science unit. In May, he reports that achievement on the Gold Rush unit test averaged 70. The district at large has not had a belief system around oral reading instruction. Students begin independent reading in first grade and are weaned off it completely by the end of second grade. Classroom reading practices embrace read aloud, shared reading, guided reading and quiet independent reading but oral reading has not been valued.

Children are observed in late Grade 1 and beyond who do not have a solid grasp of phonics and struggle to decode unfamiliar words. This suggests that phonics instruction may not be a large enough part of literacy instruction at Carver in late Kinder and Grade 1 to facilitate later reading success for many children. All first graders at risk are pulled out for 30 minutes a day of Reading Recovery by a trained support teacher, for a period of 10 weeks. Diagnostic assessments used by classroom teachers to track formative reading growth have varied from year to year. During 2007-8, the Early Literacy Survey was used with consistency and satisfaction by Kinder and Grade 1 teachers, but the district changed its survey assessment profile this year and the ELS was dropped. The district did not mandate a particular diagnostic assessment to use midyear and teachers, once again, went their own ways and generally expressed dissatisfaction with the process.

Carver hosts a week of literacy based activities the first week of every March, coincident with Read Across America, a national program endorsed by NEA. Carver's program has varied little in the past 5 years; it includes a kick-off assembly at which a large cake is raffled for a classroom party celebrating Dr. Seuss; a storybook character costume parade; conclusion of an author study by each classroom; two Literature Come to Life assemblies at which students

enact storybooks, in costume, at the direction of a contracted professional; a Literacy Night of family-friendly activities staged in classrooms or at stations in the auditorium, along with food, raffles, and free books to attract families. Recent additions include "drumroll" weeks which focus the entire school on a single literacy concept for one week or more. 2007-8 included homophones, punctuation, homographs, and general-specific relationships (three weeks prior to the STAR in June). This year's drumrolls were two: a study of idioms prior to Literacy Week and Measurement May (math with art) prior to STAR testing in June. Similarly, Math is celebrated one evening with families in the Fall and Science in late June or early July. Science Night is coincident with "Spring" Open House and a book fair is conducted simultaneously.

### **Academic Performance**

Carver students swing up and down, from year to year, on state assessments of English Language Arts (STAR), but continue to score low compared to other schools in California. This year, the district mandated that each school set quantitative SMART goals for core subject areas, based on school-wide weaknesses on state assessments. Carver focused on the CST strand Writing Strategies and Conventions because Carver students consistently perform lowest in this category. Growth of 10% or more proficiency on these items was set for all critical subgroups. On the CST, Writing Strategies and Conventions are assessed through example texts with multiple-choice responses. Writing Applications, the actual writing of texts, is assessed only at fourth and seventh grade (see Instructional Delivery).

### **Literacy Materials**

Textbooks, trade books, and packaged literacy kits are abundant but not always organized for easy access. All classrooms boast sizeable libraries organized in baskets by reading levels, authors, genres and topics. A small textbook room has been under the control of the principal who deputizes staff to move books in and out as needed. New textbooks are processed from an unused room nearby. Ancillary materials that arrive with new teaching adoptions were often held back by the previous principal as extraneous to the core program and remain unused. A large room housing overflow trade books from downsizing of the school is a treasure house of print and tape materials that has been largely disorganized and inaccessible until this school year, when a shelving system was erected and the materials roughly organized by itinerant staff. The room was also opened to teachers during the day for the first time, rather than restricting access to after school hours by request. Biliteracy materials in Spanish were removed from this room during 2007-8 and donated to a Spanish language magnet school. Unutilized ELD teaching kits may be found among the remaining materials. An open "guided reading" room in the office building contains small sets of short trade books for small group reading instruction, smartly organized by reading level (lettered system of Fountas and Pinnel). In previous years, faculty were asked to sign these sets in and out, but few did so consistently, so this year a "trust" system was implemented. Many teachers utilize this resource regularly. Other teachers retain personal sets of small-group books that were purchased in kits many years ago. The Literacy Resource Teacher oversees a small collection of class novel sets in the professional development room which may be freely borrowed.

Until this year, school budget had not been made available for new trade books for many years, although the previous principal was generous with professional books. A core set of touchstone professional books is made available to new teachers by the Literacy Resource Teacher from a supply in the professional development room. Trade materials for middle school students, especially high interest materials at low levels of English proficiency, are insufficient for the needs of the middle school students. The school library technician purchased many appropriate middle school books during 2007-8 but her vacated position has not been filled this year and, as a result, books have not been available for check out. The Literacy Resource Teacher also oversees the kits used for after school vocabulary and read-aloud programs.

Every classroom houses several networked, desktop computers available to students to use on a rotational basis. These computers tend to be older models with software outdated, outmoded and not consistently maintained by teachers. The 7th and 8th grade classrooms have newer models and their teachers are making use of ancillary software for new math and social studies adoptions. All teacher have a teaching station which includes a document camera and projector and most have a networked laptop made available to them which readily connects to the projector. Many teachers utilize online database subscriptions made available through the district, including a video database. Teachers are on their own to obtain training and practice in use of digital technologies in their classrooms and therefore the degree of implementation of technology for learning varies widely. In general, it is low at Carver, relative to what is possible, and typically teacher-centered rather than student-centered—students receive digital information passively rather than produce it. The district makes a plethora of technology classes and workshops available on evenings and weekends, for teachers who have time and interest, most of them for free. Technology use is being integrated into new textbook adoptions and in-services are readily available. Three years ago the school purchased 32 laptop computers housed on two mobile carts secured in the library. These computers have been utilized for Internet research and word processing during minimum day rotations and at other times, with classes traveling to the library to use them. They are wirelessly networked to the Internet and printers. While the carts are capable of being transported to classrooms, teachers have found it simpler to bring their students to the library. During 2007-8, a grant associated with the Arabic Language Program purchased a roomful of computers to be used for language learning software. The English Language Resource Teacher pulls out and supervises groups of ELLs at these computers during part of the day. A sophisticated audiovisual system was purchased for the auditorium in 2006-7 and is increasingly used for school-wide presentations. Many students do not have Internet connected computers at home that they can utilize for schoolwork and networking with teachers, although most have some access to digital entertainment systems. Teachers training their students on the library computers express surprise at the number of younger student who do not possess even rudimentary skills, much less skills in research and authoring, although by middle school many more students, but not all, have acquired some level of proficiency.

## **Professional Development**

The site uses a collaboration model. Teachers meet by grade-level one day a month to review student data, share student work, writing in particular, and to preview upcoming units. Teachers at Carver work well together and enjoy mutual professional inquiry. The district provides off-site professional development for new text and technology adoptions. In previous years, the Literacy Resource Teacher facilitated collaboration, but the new principal prefers to lead these sessions herself. In addition, she leads whole-staff professional development once or twice a month on minimum days, Fridays. In previous years, this time was devoted almost exclusively to mathematics development but this year the focus of these sessions has varied.

## **English Language Development**

With English Language Learners (ELLs) comprising half of Carver's current students, and as many as 70% in recent years, English Language Development (ELD) deserves to be uppermost in the planning and practice of Carver staff. However, until 2 years ago, the district had not offered teachers much in the way of curriculum and training for ELD instruction, leaving it up to individual teachers and sites. For many years, Carver had several biliteracy Spanish-English classes, but the program ended after the 2004-5 school year, when a large, Spanish-speaking cohort of ELLs was returned to their neighborhood school. The Spanish instruction in those classrooms attempted to parallel the ELA program (reading and writing workshop) in English, during another part of the day, but was much reduced compared to its English counterpart. Over the subsequent 4 years, the staff periodically examined methods texts for ELD literacy instruction during professional development time and generated a home-grown list of “talking moves” to include and encourage oral participation of ELLs in classroom learning activities. Nevertheless, ELLs, along other “English-only” classified students who speak non-standard English at home, were not learning academic English quickly enough to perform well on state and district tests.

About 4 years ago, the district commissioned a report that supported its balanced literacy approach utilizing Readers and Writers workshop for ELLs but also recommended that ELLs receive some direct instruction daily in English language skills. The district embraced a model by Dutro which emphasizes formal academic language forms within specific, practical language functions, with sufficient practice to fluency. Within the following 2 years, Dutro published curriculum materials for Systematic ELD (SELD) instruction and the district began training teachers by invitation 2 years ago. By this school year, most of Carver's teachers have been trained in the SELD curriculum and this year, Kinder through fifth grade teachers implemented a half hour daily of targeted SELD instruction, deploying students by English Oral Proficiency Level to receive instruction in combined-grade groups. Teachers report satisfaction with the approach but there is no formal evaluation or data collection tied specifically to the program.

In late fall, Carver purchased 40 site licenses for Imagine Learning English, a sophisticated language learning software endorsed by the district that diagnoses, instructs, and assesses



individual ELLs in the listening, speaking, and reading domains of English. Students were ranked by need, with Newcomers and Beginners considered neediest, and 40 students began using the software in January 2009, on a daily basis.

### **Parent Involvement**

In general, parent involvement at Carver is low and is a top priority goal for the new principal. The researcher (Harrison) considered doing a dissertation study involving parents in the literacy education of their children, but the previous principal discouraged it. A handful of parents volunteer regularly or participate on School Site Council or PTA; volunteers are formally recognized at an assembly/luncheon in July. PTA is primarily teacher driven; the current president is a longtime classroom aide as well grandparent of a Carver student; a previous president embezzled PTA funds and was formally investigated. In 2006-7, PTA was presided over by a conservative Muslim cleric who represented the Westwood community. At his introductory meeting he announced, "Welcome to a man's world." This statement characterizes the tension between the liberal principal and that conservative religious community during that year, a year that included difficult obstacles and compromises on everyone's part and escalated later in the year to local and national media attention and legal involvement.

Family academic nights (Math, Literacy, Science) are fairly well attended, as well as the winter holiday performance and a patriotic assembly in July, which were initiated 3 years ago. Parents attend recognition assemblies when their children are awarded for classroom academics and citizenship. A survey of parents in early 2009 indicated that ... During 2004-5 and 2005-6, a fulltime, Spanish-bilingual certificated Parent Academic Liaison (PAL) was assigned to our site; he held parent education workshops and regular parent meetings such as Dad's Club. However, the parent participation venues he generated were not continued after the funding for the PAL program ran out.

### **Physical Location**

Summarized in Chapter 3.

### **Student Population**

Summarized in Chapter 3. The population has been steadily decreasing over the years from a one time capacity of about 700, to less than 300. The low-income residential neighborhood that feeds Carver has a high transience rate; mobility statistics provided by the district for the previous year, 2007-8, indicate that 26% of the student body turned over between September and July.

### **Faculty and Staff**

This year Carver has 20 classroom teachers spanning pre-school to Grade 8. There are 14 regular program SEI/MEC classrooms: two kindergartens, a K-1 combination, a first grade

class, a 1-2 combination, a second grade class, a 2-3 combination, two third grades classes, a fourth grade class, a fifth grade class, a sixth grade class, a seventh grade class, and an eighth grade class. In addition, there are two Special Day classes for certain special education students, one 2-3-4 combination and a 5-6 combination. There are two ILS grade combination classes and two SEEC pre-school classes. Carver middle school classes are currently self-contained by grade. The first year, 2006-7, 4-5-6 and 7-8 were combined in gender-separate classrooms to accommodate the late-arriving Westwood cohort. The following year, the sixth grade classroom was self-contained but 7 and 8 changed teachers every hour or two, with one teacher specializing in Math and Science, the other in English and Social Studies. This year began that way, but switched mid-fall to self-contained, considering the best interests of the 8th grade students.

Faculty turnover at Carver is slow. Twelve classroom teachers have been at Carver 4 years or longer; two are entering their fourth year. Several teachers hold Masters degrees and one has an administrative credential and serves as administrative lead teacher when the principal is off site. Three support staff, the Science Prep Teacher, the Early Literacy Teacher (Reading Recovery) and the Literacy Resource Teacher have been here 4 years or longer. The Resource Support Provider for Special Education is in her second year at Carver. Additional certificated support staff include a full-time English Learner Support Teacher, fulltime speech pathologist, part-time psychologist, part-time counselor, and itinerant teachers specializing in music, art, and PE. Classified supports include a cafeteria staff who serve free breakfast and lunch to all students who want it, a fulltime guidance assistant who helps the principal with student disciplinary referrals, adult aides in Special Education classrooms, an English learner support aide, custodial staff, parttime nurse and nursing assistant, and three front-office clerical persons; a parttime library tech position has not been filled. Lunchtime eating and play is supervised by several of these adults. Certificated support staff supervise students entering and leaving school at either end of the day. There are a handful of regular parent volunteers.

### **Change of Leadership**

A new principal, Stephanie Mahan, joined Carver for 2008-9 following the involuntary transfer of the previous principal, who had served at Carver for 8 years. Faculty members overwhelmingly welcomed the change; the two women have very different relational styles and many of the staff had chafed under what they describe as a lack of trust in them by the previous principal and, for a few, outright belittling or favoritism. While a collective “exhale” served to reassure and refresh the staff’s confidence and mission, it became apparent by mid year that some discipline, order, and attention to detail had been lost, and the staff, used to letting the principal control decisions and serve many functions in their place, needed to use the trust invested in them to step up and take responsibility for the collective environment. A newly formed Instructional Leadership Team and the opportunity to build a consensual school discipline policy through a mentored, systematic approach became opportunities for staff to work side by side, rather than under, their leader.

## School Climate

The current small faculty at Carver is exceptionally tight knit and free of cliques. Most teachers share lunch together and many have developed friendships around mutual interests beyond teaching. Faculty turnover is slow and the greatest negative reported to teaching at Carver is the presence of 6th, 7th, and 8th graders on campus, which began with the assimilation of the Westwood charter in 2006-7. Unlike other K-8 schools, which build one grade at a time, Carver's middle school students arrived all at once, to a principal and staff inexperienced with children of their age. Discipline problems at the school increased dramatically and many faculty members think that the older students negatively influence the behaviors of younger students. Many K-5 teachers resented the change that had been forced on the school and treated the middle-school students as outside their sphere of responsibility. When gender segregation for the Westwood students was ended after 2006-7, discipline problems among the middle school students reached extremes. The previous principal strongly believed in due process for all disciplinary referrals, which, in her words, had students "stacked up like airplanes" in the guidance center. By spring 2008, she and the guidance assistant were overwhelmed, imploring staff to get involved beyond their own classrooms and implementing extreme measures to control inappropriate physical touching. Two of the three middle-school classrooms were often out of control. While some of that can be attributed to inappropriate teacher assignment, the passive "hands off" stance by the staff at large also contributed, along with a collective lack of knowledge about how to work with adolescents. Extreme infractions included physical destruction of a bathroom, overt sexual harassment, cussing out of reasonable adults, and beating up a student on video for sharing over the Internet.

The incoming principal changed teaching assignments for the three older classrooms for this year, which helped considerably, and she worked to bring older students into the school community through a community-service elective and more active participation in out-of-the-classroom functions. However, a general lack of order and discipline in common areas was still observed, school wide, and student surveys midyear revealed that many students felt unsafe in common areas, particularly older students. This is being addressed through PBIS, a slow, systematic process for developing detailed school-wide policies by consensus, with partial implementation to begin late in the school year and fuller implementation in 2009-10. This year, more attention was also paid to the physical education needs of older students, with an influx of portable PE equipment that made that possible. Carver has no grass field, gym, tennis courts, or other common amenities of middle schools and only one basketball court. Physical activity takes place on large expanses of blacktop, with portable equipment, or on a dirt field at the back of the school. Recess is unstructured, although PBIS is making policy to change this for the 2009-10 school year.

While the previous 2 years had seen some loosening of real or perceived restrictions against "non academic" time spent with the arts and field trips, the incoming principal has a strong belief system around inclusion of the arts and powerful offsite learning experiences, while the previous principal often responded to such efforts as a waste of time.

## **APPENDIX D**

### **GRAY ORAL READING TEST 4: SAMPLE PASSAGE AND QUESTIONS**

## GRAY ORAL READING TEST 4: SAMPLE PASSAGE AND QUESTIONS

### Story 5

**Prompt:** Say, "This story is about a bird having a problem. Read the story to find out what the problem is and how it is solved."

**Maximum words examiner may provide:** 21

- 1        A blue jay was perched on a limb looking for water. Having just flown  
2        a great distance, she was very thirsty. At that moment she happened to  
3        spot a water jar on the ground, so she flew down and tried to get a drink  
4        from the jar. But there was so little water in the jar that she was unable to  
5        drink. Just as she felt that she would surely die of thirst, an idea struck her.  
6        The jay gathered a pile of stones and began dropping them in the jar. Little  
7        by little the water rose and at last the jay could drink her fill.

Time (in seconds): \_\_\_\_\_

Deviations from Print: \_\_\_\_\_

### Comprehension Questions

- \_\_\_\_ 1. Why couldn't the jay drink the water?  
A. The water was too low in the jar.  
B. The jar had a leak.  
C. The water tasted bad.  
D. The water was too dirty.
- \_\_\_\_ 2. The jay in this story is \_\_\_\_\_.  
A. clever  
B. tired  
C. hungry  
D. silly
- \_\_\_\_ 3. What is the main idea in this story?  
A. A bad situation never lasts a long time.  
B. Hope is better than anger.  
C. Brains are often the key to survival.  
D. Everyone likes a good joke.
- \_\_\_\_ 4. How do you think the jay felt when she was unable to drink?  
A. surprised  
B. puzzled  
C. worried  
D. hopeful
- \_\_\_\_ 5. When the jay was finally able to reach the water, she was probably \_\_\_\_\_.  
A. tired from all her hard work  
B. proud of her idea  
C. rested from her journey  
D. angry about wasting so much time

☐

Comprehension Score

### Converting Time and Deviations from Print to Rate and Accuracy

Rate/Accuracy Scores	0	1	2	3	4	5
Time	>119	76-119	66-75	50-64	41-49	<41
Deviations from Print	>10	8-10	6-7	5	3-4	0-2

Rate Score

+

Accuracy Score

=

Fluency Score

Source: From Wiederholt, J. L., & Bryant, B. R. (2001). *Gray Oral Reading Tests: Examiner's manual* (4th ed.). Austin, TX: Pro-Ed, p. 9.

**APPENDIX E**

**MULTIDIMENSIONAL FLUENCY RUBRIC FOR**

**ASSESSING THE PROSODIC FEATURES**

**OF READING FLUENCY**

## MULTIDIMENSIONAL RUBRIC FOR ASSESSING THE PROSODIC FEATURES OF READING FLUENCY

NAME \_\_\_\_\_

### Fluency Rubric

	1	2	3	4
<b>Expression and volume</b>	Reads in a quiet voice as if to get words out. The reading does not sound natural like talking to a friend	Reads in a quiet voice. The reading sounds natural in part of the text, but the reader does not always sound like he or she is talking to a friend	Reads with volume and expression. However, the reader slips into expressionless reading and does not sound like he or she is talking to a friend.	Reads with varied volume and expression. The reader sounds like he or she is talking to a friend with his or her voice matching the interpretation of the passage
<b>Phrasing</b>	Reads word by word in a monotone voice.	Reads in two or three word phrases, not adhering to punctuation, stress, and intonation.	Reads with a mixture of run-ons, midsentence pauses for breath, and some choppiness. There is reasonable stress and intonation	Reads with good phrasing, adhering to punctuation, stress, and intonation.
<b>Smoothness</b>	Frequently hesitates while reading, sounds out words, and repeats words or phrases. The reader makes multiple attempts to read the same passage.	Reads with extended pauses or hesitations. The reader has many "rough spots."	Reads with occasional breaks in rhythm. The reader has difficulty with specific words and/or sentence structures.	Reads smoothly with some breaks, but self-corrects with difficult words and/or sentence structures.
<b>Pace</b>	Reads slowly and laboriously.	Reads moderately slowly	Reads fast and slow throughout reading.	Reads at a conversational pace throughout the reading

Score \_\_\_\_\_

Scores of 8 or more indicate that the student is making adequate progress in fluency

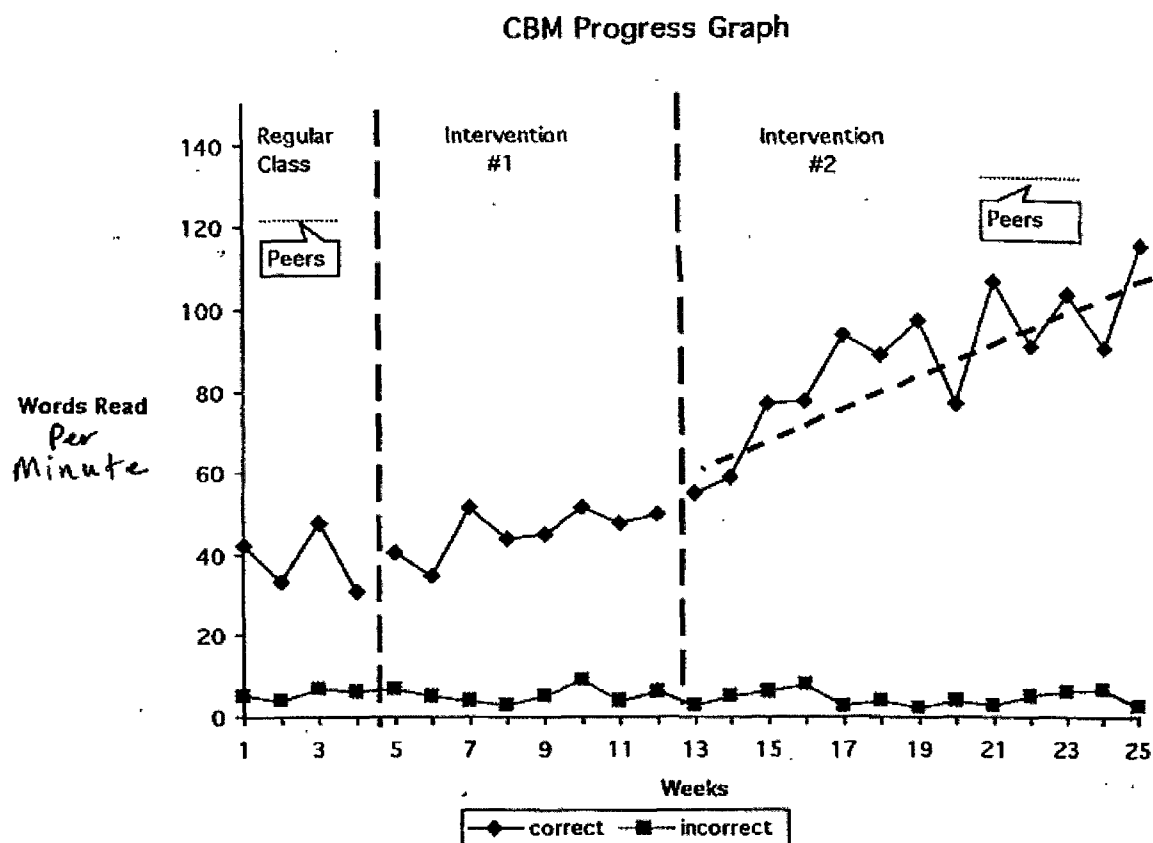
Scores below 8 indicate that the student may need additional instruction in fluency.

*Source: Rasinski, T. V. (2003). The fluent reader: Oral reading strategies for building word recognition, fluency, and comprehension. New York, NY: Scholastic, p. 120.*

**APPENDIX F****CBM ORAL READING CHART—SAMPLE**



# CBM ORAL READING CHART—SAMPLE

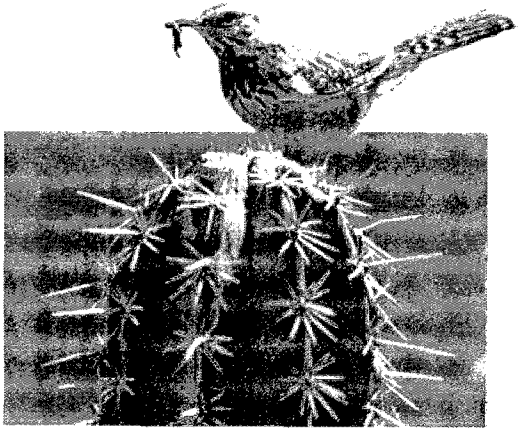


Source: Adapted from Deno, S. L., & Marston, D. (2006). Curriculum-based measurement of oral reading: An indicator of growth in fluency. In S. J. Samuels & A. E. Farstrup (Eds.), *What research has to say about fluency instruction* (pp. 179-203). Newark, DE: International Reading Association, p. 182.

**APPENDIX G****QUICKREADS® SAMPLE PASSAGE, LEVEL C**

## QUICKREADS® SAMPLE PASSAGE, LEVEL C

### Plants



This bird has learned how to stay safe from the plant's thorns.

44

### Dangerous Plants

We usually don't think of plants as dangerous. Yet parts of some plants can be poisonous. Other plants have thorns that can hurt people and animals. These poisonous or thorny parts keep the seeds of plants from being eaten or harmed.

We eat the part of the potato<sup>2</sup> plant that grows underground. This underground part is safe to eat. Yet the leaves and flowers of the potato plant above the ground are poisonous.<sup>3</sup> Roses are beautiful flowers, but their bushes have sharp thorns. An animal that tries to eat a rose may get a mouthful of thorns for dinner!<sup>4</sup>

45

Source: Hiebert, E. H. (2002a). *QuickReads: A research-based fluency program* (Level C, Book 1). Parsippany, NJ: Modern Curriculum Press, pp. 44-45.

## **APPENDIX H**

**SAMPLE PERFORMANCE-READING SCRIPT**

**ADAPTED FROM A QUICKREADS® PASSAGE**

SAMPLE PERFORMANCE-READING SCRIPT  
ADAPTED FROM A QUICKREADS® PASSAGE

## ~~Plants and Life on Earth~~

<sup>A</sup> [If you live in the city, you may not realize how much you need plants.]

<sup>B</sup> [Most of the 350,000 kinds of plants that grow on

Earth could live without people.] [<sup>C</sup>However, people could not

live<sup>25</sup> without plants.] [<sup>B</sup>Every kind of food eaten by people

comes directly or indirectly from plants.] [<sup>A</sup>Unlike animals,

plants make their own food. Through a process<sup>30</sup> called

photosynthesis, plants use sunlight.] [<sup>C</sup>carbon dioxide.] [<sup>B</sup>water,]

<sup>A</sup> [and minerals to make their own food.]

<sup>C</sup> [In photosynthesis, the green leaves of plants soak up sunlight.<sup>75</sup> Leaves also take in a gas called carbon dioxide.]

<sup>B</sup> [The roots of plants gather water and minerals from the soil.] [<sup>A</sup>During photosynthesis, plants take in<sup>100</sup> carbon dioxide

and give off oxygen.] [<sup>B</sup>People do just the opposite.] [<sup>C</sup>They

breathe in oxygen given off by plants and breathe out

carbon dioxide.<sup>124</sup> Every time you breathe<sup>ABC</sup> [thank a plant!]

**APPENDIX I****ORAL FLUENCY RUBRIC—SCORING SHEET**

## ORAL FLUENCY RUBRIC—SCORING SHEET

Student Name: \_\_\_\_\_ Date Scored: \_\_\_\_\_

Date Passage Read: \_\_\_\_\_ Rater: \_\_\_\_\_

GORT    A        B        Story # \_\_\_\_\_

	1	2	3	4	Notes
<b>Expression and volume</b>  Conversational Natural	Reads in a <b>quiet</b> voice as if to get words out The reading does <b>not</b> sound <b>natural</b> like talking to a friend	Reads in a <b>quiet</b> voice The reading sounds <b>natural in part</b> of the text, but the reader does not always sound like her or she is talking to a friend	Reads with <b>volume</b> and expression However, <b>sometimes slips into expression-less</b> reading and does not sound like her or she is talking to a friend	Reads with <b>varied volume and expression</b> The reader sounds like he or she is talking to a friend with his or her voice <b>matching</b> the <b>interpretation</b> of the passage	Score: _____
<b>Phrasing</b>  Phrase length Punctuation Stress	Reads <b>word by word</b> in a <b>monotone</b> voice	Reads in <b>two or three word phrases</b> , not adhering to punctuation, stress, and intonation	Reads with a <b>mixture</b> of run-ons, mid-sentence pauses for breath, and <b>some choppiness</b> There is <b>reasonable stress</b> and intonation	Reads with <b>good phrasing</b> , adhering to punctuation, stress, and intonation	Score: _____
<b>Smoothness</b>  Hesitation Pausing Repetition	Frequently <b>hesitates</b> while reading, <b>sounds out</b> words, and <b>repeats</b> words or phrases The reader makes multiple attempts to read the same passage	Reads with extended pauses or hesitations The reader has <b>many "rough spots."</b>	Reads with <b>occasional breaks</b> in rhythm The reader has <b>difficulty with specific words</b> and/or sentence structures	Reads <b>smoothly with some breaks</b> but <b>self-corrects</b> with difficult words and/or sentence structures	Score: _____
<b>Pace</b>  Conversational	Reads slowly and <b>laboriously</b>	Reads moderately slowly	Reads <b>fast and slow throughout</b> reading	Reads at a <b>conversational pace</b> throughout the reading	Score: _____

Comments/Noticings: \_\_\_\_\_

Total score: \_\_\_\_\_

**APPENDIX J**

**CASE STUDY SUMMARY NOTES  
FOR ONE STUDENT**



### CASE STUDY SUMMARY NOTES FOR ONE STUDENT

Name	[Student]
Grade	4
GORT Rate Accuracy Fluency Composite Comprehension  Sum of Standard Scores Percentile Change Oral Reading Quotient Miscue Analysis	<b>Increase of 2 Standard Scores</b> <b>Increase of 2 Standard Scores</b> Increase of 2 Standard Scores <b>Increase of 3 Standard Scores</b>  Increase of 5 Increase 17 points Increase of 15 Post: <b>Far fewer miscues over equivalent passages</b> (an additional passage had to be analyzed for Form B to come close to expected miscue total), increase in % of miscues showing visual similarity but no change in % of miscues showing function similarity, slight increase in self-correction rate, probably trivial.
Fluency Rubric (based on combined scores)	<p>Stories 4 and 5 were compared. In Form A, Story 4 is considered to be more familiar and Story 5 less familiar. In Form B, Story 4 is considered to be less familiar and Story 5 more familiar. Between Forms, Story 4 is more familiar for Form A and Story 5 is more familiar for Form B.</p> <p>Overall, mixed results: 0.75 decrease for Story 4 and a moderate increase of 1.75 for Story 5.(possible familiarity effect). [Student] demonstrates a 0.5 decrease in Expression and a 0.25 decrease in Pace for Story 4 (more familiar to less familiar). Story 5 (less familiar to more familiar) shows a 0.5 to 0.75 increase in Expression, Smoothness, and Rate but not Phrasing.</p>
CBM—Weekly	<p>[Student] was placed at Level D in the QuickReads curriculum but moved to Level C following the second CBM reading.</p> <p>[Student] read with me on 7 occasions at least a week apart. The overall trend was an increase in both rate and accuracy, which is reflected on the GORT. I observed that [Student] often dropped articles and was challenged by long words. I coached her to use the short vowel sound before double consonants, to pay attention to articles, and to “look all the way through words.” Her miscues were discussed and many framed as “smart.” <i>The discussion on March 11 was accidentally recorded and might serve as an appended transcript of a CBM session.</i></p>

ELD Status	[Student] is a native Somali speaker born in Missouri. [Student]'s September 2008 CELDT (hand-scored) showed her to be Intermediate Overall as well as Intermediate in Reading. She performed at the Basic level on the June 2008 CST for ELA, at the end of third grade, with Reading Comprehension at 75%. The September 2008 Gates-McGinitie assessment indicated a reading grade equivalent of 2.4.
Schooling History	[Student] attended Kinder and Grade 1 at the Islamic Center of Greater Kansas City, MO and entered Carver mid-Grade 2 where she has been enrolled continuously in SEI classes.
Health History	The cum file does not reveal any health or learning concerns for [Student].
Participation in ELD and other programs	
Motivation/Participation	[Student] was a regular, motivated participant.