

CROSSING THE DIVIDE:
CLOSING THE COGNITIVE AND AFFECTIVE GAPS
THAT PREVENT SUCCESSFUL READING IN THE UPPER ELEMENTARY YEARS

by

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ABSTRACT

Significant numbers of children experience reading difficulty in the intermediate school years. Inexperience with expository text may partially explain this difficulty. While much of the extant research has focussed on the delivery of effective early interventions, investigation of efficacious practices with intermediate level struggling readers continues to require investigation. A case study that documents a research-based intervention with two struggling intermediate students is presented in this thesis. It explores a methodology that combines decoding and comprehension strategy instruction with fluency training, primarily utilizing expository text from children's popular literature. The strong positive results obtained are thought to be linked to the balancing of skill and strategy instruction with affective considerations. Phonological core deficits appear to have been addressed through oral repeated reading preceded by listening-previewing and accompanied by a "switched-on" self-monitoring for comprehension strategy. The findings suggest harmful effects may occur with some struggling readers from the use of fluency training that employs unengaging text and emphasizes speed over accuracy, expression and construction of meaning.

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Dedication

I dedicate this to my family, Martin, Allison, Lindsey and Kelsey. Thanks for believing in me and thanks for giving me the time I've needed to try my wings.

Chapter One: INTRODUCTION TO THE PROBLEM AND ITS SIGNIFICANCE

Background and Justification

Reading is the primary foundational skill all students must possess for school success. In the late elementary years of education, students are expected to read independently, at a level of comprehension which enables them to use reading for learning purposes (Chall, 1983; Allington, 2002). While this is a transition many students find difficult (hence the ubiquitous fourth grade slump) (Chall, 1983; Allington, 1995, 2001, 2002), for students who experience gaps and delays in early reading skills and strategies (normally obtained in grades one through three) this can be an especially difficult shift. In particular, many do not have the available cognitive resources necessary for higher level text comprehension as those resources are being directed to lower-level functions such as decoding words (Samuels & Flor, 1997). They are therefore at risk for general failure in all subjects which rely upon higher level reading comprehension (Chall, 1983; McCormick, 1999; Allington, 2002). Additionally, it appears that older children and adolescents who cannot read experience limited cognitive growth in relation to their peers, the gap growing at an exponential rate with each passing year that the reading delay is not addressed (Stanovich, 1986). Research pertaining to effectively addressing reading delays with older children and adolescents is beginning to show the positive benefits of intensive tutorial instruction (Lee & Neal, 1993; Lovett, et al., 2000; Torgesen, 2001; Gaffney, et al., 2002). This is in direct contrast to the poor results past remedial reading and special education approaches have rendered for students in the late primary grades and beyond (Stanovich, 1988; Spiegel, 1995; Torgesen, 1998; Klenk & Kibby, 2000; Allington, 2001).

Purpose of the Present Study

The purpose of the present study is to use an instructional case study to address the cognitive and affective gaps that prevent two upper primary school children from successfully making the transition to independent, fluent readers who employ a wide range of decoding and comprehension skills and

strategies in their reading behaviour. The study seeks to specifically investigate the extent to which determination of the cognitive and affective gaps which are present in the participants' reading behaviour, followed by direct reading instruction provided in an intensive tutorial setting, raise the participants' reading level, enabling them to successfully handle the required expository/informational text reading for their grade level. Insights garnered from this study will add to extant research pertaining to effectively addressing reading disability.

Principal Research Question

Does determination of the specific gaps in early reading processes, and an attempt to fill in those cognitive and affective gaps, result in improving the reading of two students experiencing difficulty at the intermediate level of elementary school?

Research Hypothesis

Hypothesis: Attention to weaknesses in early reading skills and strategies when provided in an atmosphere that also addresses the affective needs of the reader will result in improved reading skills, strategies and attitudes for the participants involved in the case study. It is expected that as efficient reading skills and strategies are internalized, the participants will experience a corresponding improvement in comprehension and affective attitudes toward reading in general.

Significance of the Research

This study was undertaken at a time (2003) when several school boards in the Lower Mainland of British Columbia were beginning to invest heavily in early intervention programs. At this same time, the British Columbia Ministry of Education's definition of Learning Disabilities (LD) had recently been changed, making it a far more inclusive definition than the one previously used (BC Ministry of Education, 2002). This took place with the simultaneous de-targeting of special education funding, and the removal of high incidence LD students¹ from the per child funding, the net effect being that funding for high incidence LD

¹ This includes students who have: mild learning disability, learning disability, speech difficulty, moderate behaviour difficulty, and mild mental illness. It also includes gifted students (BC Ministry of Education, 2003a).

instruction, became a part of general operating expenditure (BC Ministry of Education, 2003a). Allocation of that funding in the 2003/2004 school year was determined by the local school board, and in the school year 2004/2005 allocation of these funds will commence to be at the discretion of the local school principal. While this may appear to a simple reorganization of funding, it must be noted that this funding comes from general core funding which must also pay for teachers' recent salary increases. The net effect: dramatically reduced funding for LD students. Within this context fewer children are being tested and identified for learning assistance. It is estimated that approximately 80% of all LD students have a reading disability (Klenk & Kibby, 2000). If fewer children are being served by learning assistance programs within the local school, then it stands to reason that fewer children with reading difficulty are being served.

All of this takes place against a backdrop of the trend toward the full Integration of Special Education students in the regular classroom, which places the onus on the classroom teacher to address the literacy difficulties of LD students, while teaching the children who fall into the general category, and enriching those who have been labelled Gifted. Many teachers consider themselves unprepared for this challenge (Crockett & Kauffman, 1998). Changes to British Columbia teachers' collective agreements have also taken place recently: prior to 2002 these agreements limited the numbers of special needs students in the regular classroom. This is no longer the case. "This has meant that the guarantees for students with special needs ... no longer exist (British Columbia Teachers' Federation, 2003). We thus see a picture of classrooms which potentially serve increasing numbers of special needs students through teachers who themselves feel unprepared to meet the disparate needs of those students.

While funding spent on early intervention should eventually result in fewer children leaving the primary grades with literacy difficulty, there presently exists a cohort of students who have not been served by this initiative. British Columbia Foundation Skills Assessment results for 2003 (BC Ministry of Education, 2003b) show that at the provincial level, twenty-three percent of all grade four students are not meeting expectations in Reading Comprehension (see Table 1). While the percentages for grades four,

seven and ten have not changed dramatically in the short time the assessment has been in place, we certainly do not appear to be making progress with addressing the needs of a large proportion of students. Additionally, it is concerning that little progress appears to be made as students move into British Columbia's secondary schools: failure to meet expectations for reading comprehension continues to hover at 25%. These statistics have not gone unnoticed as evidenced by the fact that several school boards in the Lower Mainland (for instance the Vancouver School Board, the North Vancouver School Board and the West Vancouver School Board) have included improvement of literacy instruction as key goals in their accountability contracts.

Table1
**FSA Results: Percentage of British Columbian Students
 Not Meeting Expectations in Reading Comprehension**

	Grade 4	Grade 7	Grade 10
2000	21	19	21
2001	22	24	25
2002	20	24	29
2003	23	23	26

(Source: British Columbia Ministry of Education, 2003b)

These statistics demonstrate the need to address reading difficulties early on, for they do not simply take care of themselves as students move through the educational system in British Columbia. While British Columbia certainly is not unique in this area, the fact remains that we must continue to seek understandings and methodologies which will support those in the intermediate grades of British Columbian schools who have not become strong, independent readers. It is hoped that this research will add to those understandings and methodologies.

Definition of Terms

- Struggling reader – The term struggling reader has been adopted in this thesis in reference to the cohort of students who fall up to two grade levels below grade level expectations in reading ability.

- Disabled reader – This term is used to denote readers who fall more than two to three grade levels below grade level expectations in reading ability.
- Fluency – Accuracy and speed, with appropriate expression and intonation.
- Prosody – Features such as stress, intonation, and duration that provide cues to phrase structure.
- Expository text – Sometimes referred to as content area text. These are texts which provide information in a non-narrative form.
- Narrative text – Texts such as story books or novels which tells a story in narrative fashion.
- Phonological awareness – Sensitivity to syllables, morphemes, and the phonological awareness that operate on them (Mann, 1998).
- Phonemic awareness – Sensitivity to phonemes (Mann, 1998).
- Morphology – Morphemes are the smallest linguistic units which carry meaning (such as the prefix un- or the suffix –ing). The morphology of a word refers to dissecting the word into constituent units of meaning.
- Working memory – As defined by Baddeley (1986, cited in Swanson, Cooney, & O'Shaughnessy, 1998):

A limited capacity central executive that interacts with a set of two passive store systems used for temporary storage of different classes of information: the speech-based articulatory loop, and the visual sketch pad. The phonological or articulatory loop is responsible for the temporary storage of verbal information; items are held within a phonological store of limited duration, and the items are maintained within the store via the process of articulation. The sketch pad is responsible for the storage of visual spatial information over brief periods and also plays a key role in the generation and manipulation of mental images.

(Swanson, Cooney, & O'Shaughnessy, 1998p.134)

Assumptions

Constructivist Theory of Learning; Vygotsky's model of learning (1978, cited in McCormick, 1999) provides the theory of learning that informs this study. Particularly important is his idea of a zone of proximal development that exists within each learner: this zone delineates what s/he may accomplish independently and what s/he may accomplish with assistance. Instructing the child within her/his personal

zone of proximal development, through what he terms, scaffolded instruction, allows the teacher to lead the child toward increasingly sophisticated learning outcomes.

Interactive models of reading: Rummelhart's (1994) interactive model depicts reading as a complex process, consisting of the parallel processing of various (sensory, syntactic, semantic, and pragmatic) sources of information which interact with each other in the process of acquiring meaning from text. The specific knowledge sources Rummelhart details are: Featural Knowledge; Letter-level knowledge; Letter-cluster knowledge; Lexical-level knowledge; Syntactic knowledge; and Semantic-level knowledge.

Adams' (1990) interactive model of reading has also been informative in this study. She builds upon the theories of interactive processing set out by Rummelhart and McClelland (1986, cited in Adams, 1990) to demonstrate the interconnectedness between four "processors" within the brain: the orthographic processor, the phonological processor, the meaning processor, and the context processor. While not all agree on her contention (Goodman, 1994), that "skilful readers visually process virtually every letter of every word they read, translating print to speech as they go" (Adams, 1994, p.845) this study assumes that in their early reading development children need to receive instruction that leads them to focus, for a time, on all of the letters of the words they read (Pressley, 2002). In focusing on sound-symbol relationships, the ability to "sound it out" is developed (a skill/strategy proficient readers resort to when other means of word identification fail (see Pressley, 2002)), tying into Chall's (1983) notion of the necessity of temporarily becoming "glued to the print." Within Chall's developmental framework this temporary stage is an important step toward allowing children to progress to a higher stage where they do not consciously process every letter or letter cluster, but are able to do so should the need arise. (See below)

Chall's Reading Stages: Chall's (1983) development of the idea that acquisition of reading is achieved developmentally through a set of more or less discrete stages is seen as helpful in understanding the difficulties of struggling readers. Though problems have arisen with her promotion of synthetic phonics over other approaches (see Cunningham & Cunningham, 2002), research, nonetheless, has upheld the value of taking a systematic approach to the teaching of phonics in the early years. Similarly, Chall's

conception of a strict partition between learning to read in the primary school years and reading to learn in the intermediate and senior years of school, has been shown to be less black and white than her representation suggests (see Duke, 1999). And finally, her reliance on the discrepancy theory for defining reading disability, a theory which has since been disproved (Siegel, 1989, cited in Torgesen, 1998), is noted as problematic; though her statement that the evidence pointing toward phonological processing difficulty as the hallmark of those experiencing severe reading difficulty, continues to hold in the literature. Notwithstanding these caveats, Chall's work provides an important framework for understanding reading acquisition.

The necessity of developing a conceptualization of the stages of reading acquisition, as Chall notes, arose as 20th century school systems moved away from the multi-grade one-room schoolhouse to graded classrooms where teachers increasingly had little idea of the progression children follow in reading acquisition. Given that many children do not necessarily follow the average timeline for progressing through the stages, it is vital that teachers be equipped with a familiarity of the features of each developmental stage in order to scaffold the development of those in their classrooms who fall outside the norm. Below is an outline of Chall's (1983) first four stages: stages typically seen in the primary and intermediate grades of elementary school:

Stage 0 - Prereading: Birth to Age 6

- accumulation of knowledge about letters, words and books
- growth in control over various aspects of language – syntax and lexicon
- gain insight into the nature of words: phonological awareness
- acquire the ability to discriminate and name most letters of the alphabet
- many acquire the ability to write their name and some dictated words
- can identify “real” writing
- can recognize logographic forms of text
- some can read familiar text
- many “pretend” read – displaying understanding of conventions of text such as book orientation, text directionality, page turning, print conveys the message, illustrations support the text

Stage 1 – Initial Reading, or Decoding Stage: Grades 1-2, Ages 6-7

- Essential aspect: learning the arbitrary sets of letters and associating those with the corresponding parts of spoken words
- Discovery that the spoken word is composed of a finite number of sounds

Biemiller's study of oral reading errors (cited in Chall, 1983):

- Phase 1: word-substitution errors semantically and syntactically adequate
- Phase 2: increase in non-responding and more errors which bear graphic similarity, but less semantic acceptability
- Phase 3: continued concern with graphic exactness, and return to greater semantic acceptability
- Children in the first phase resemble Stage 0 readers in that the print has a minimal effect on their reading
- In order to progress, readers must give up on pseudoreading, move through Phase 2 where they become tied to the text, temporarily "glued to the print"
- Though readers must move on to Phase 3, progressing through Phase 2 is critical in that it supplies the reader with the knowledge of graphophonic relationships required to make the choices good readers must make regarding when to give more or less attention to the actual print of a text
- Children must develop the ability to identify unknown words in order to gain proficiency in Stage 2

Stage 2 – Confirmation, Fluency, Ungluing from Print: Grades 2-3, Ages 7-8

- Consolidation of Stage 1 learning of decoding and use of context leading to fluency
- Needs to be completed using text which is familiar in its use of language and content, in order for readers to fully internalize high frequency words to the point of automatic recognition
- This stage becomes a sticking point for many. When children are not immersed in large amounts of familiar text with which to practice, they often do not develop the fluency required to tackle the more complex and new ideas required of Stage 3 readers

Stage 3 – Reading for Learning the New: A First Step

- This stage marks the beginning of using text to learn new knowledge, information, thoughts and experiences
- This is the beginning of the transition from learning to read to reading to learn.²

Phases of Word Learning: For reasons similar to the need to understand the stages of reading

acquisition, understanding of the phases of word learning is valuable for elementary school teachers and those working with the struggling readers. McCormick (1999) blends current conceptions of the phases of word learning to form a comprehensive guide. All citations given are found in McCormick, 1999. The progression outlined below is recognized in this study:

Phase 1

Referred to as: **Pre-alphabetic** (Ehri & McCormick, 1998) **Logographic** (Ehri, 1991; Firth, 1985) or **Selective Cue** (Juel, 1991) in the literature.

- Student can read a few words in a context-free situation (i.e. in isolation)

² While the notion of a fixed stage at which expository text learning begins has been challenged in the more recent literature, Chall's conception that Stage 3 reading marks the time at which children are fully equipped to undertake the complexities of using text for learning purposes appears to hold true.

- Student uses only minimal gross clues to the word, such as its length or shape to recollect it. Different types of cues may be used from word to word.
- Often letters are not used as cues to recognize a word (even though these are major clues for more advanced readers)
- If consideration is given to letters, attention is only directed to certain ones. Student does not use the full sequence of letters in a word to recall it. Letter clues may not be remembered from one encounter with a word to the next.
- Sounds of letters (i.e. letter-sound correspondences) are not used.
- Words are best learned when only a few are presented at a time – when larger sets are introduced the student is overwhelmed and there is failure to learn.
- Students remember a word only when they have a good deal of exposure to it. Short-term exposure produces little maintenance of learning.

Phase 2

Referred to as: **Rudimentary-alphabetic** (Ehri, 1991), **Partial-Alphabetic** (Ehri & McCormick, 1998), and **Visual Recognition** (Mason, 1980) in the literature.

- Student recognizes more words in context-free conditions than in preceding phase.
 - Words are learned and remembered after fewer exposures than necessary in Phase 1, but still many exposures are needed.
 - There is analysis of words into letters.
 - There is dependable recall of some letter clues.
 - Beginning and ending sounds are sometimes used as an aid in word recognition. (Also, both in conjunction – Boundary letters.)
 - Words are predominantly read by sight rather than through application of sounds, but recognition is more accurate than in the previous phase because of improved use of letter cues.
- The word learning traits of phases 1 and 2 are seen commonly and naturally in preschool or kindergarten children, or in students in early first grade reading instruction.

Phase 3

Referred to as: **Cipher** (Gough & Hillinger, 1980), **Spelling Sound** (Juel 1991), and **Full-Alphabetic** (Ehri & McCormick, 1998) in the literature.

- Students begin to learn and use more letter-sound relationships (also called grapheme-phoneme correspondences).
- Initially, when students start to use more sound-related cues, they may decode words slowly letter by letter.
- Eventually, students progress to a phase in which words are decoded more swiftly.
- Many words are identified through sound-symbol decoding, but words also are learned by sight.
- There is a significant increase in the number of words a reader can learn in a given amount of time.
- Word recognition and identification are more consistently correct than in previous phases.
- When errors do occur, fewer nonsense words are produced; there are more real-word substitutions.

Phase 4

Referred to as: **Orthographic** (Ehri, 1991), or **Consolidated-Alphabetic** (Ehri & McCormick, 1998) in the literature.

- Because the student has read many words at this point in which the same letter sequences recur, new words can be recognized by analogy. For example, after a reader knows *make*, *bake*, *take*,

cake, lake, rake and wake, s/he may generalize this familiar word unit to *shake, brake, and flake* without direct instruction or without resorting to slower letter-by-letter use of the corresponding sounds.

- Through strategies learned in Phases 2 and 3 – and through the ensuing increases in experiences with print – students accumulate enough exposure to the spelling patterns in words, sequences they come to recognize as typical units of words. Familiar sequences can then pronounced on sight (such as *-ing, pre-, -un, -tion*). This allows the reader to decode words in bigger units than are used in letter-by-letter decoding seen in Phase 3. In addition, and partially because of this, more multisyllabic words can be decoded easily and quickly.
- During this phase, more words can be recognized by sight.
- Reading is more fluent because of skills developed in previous phases.

Phase 5

Referred to as **Automatic Stage** (Chall, 1983) in the literature.

- Most words are recognized by sight
- Reader has stable control over a variety of ways to learn and recognize words, which were assimilated and practiced in earlier phases and can be put to use in when unknown words are encountered

Differentiated Learners:

As outlined above, readers appear to progress, to a certain extent, through a set of stages in the process of becoming proficient readers. These stages vary in length and duration from reader to reader. Some readers will progress through these stages with little effort and limited teacher/parent input, others will require greater amounts of explicit teaching, intensity of instruction, and scaffolded support. Because of this differentiated pace of reading acquisition, a linear model of classroom reading instruction which expects all children to progress through the stages of reading acquisition at more or less the same rate, will leave a certain proportion of children behind. This is evidenced in the observation that nearly 20% of all children will experience difficulty with learning to read (McCormick, 1999). While this figure is expected to drop with early intervention initiatives, nonetheless, there will continue to remain a cohort who for a host of environmental and “organic” reasons will not be served by the linear approach to classroom reading instruction. This study takes the position that a spiralling approach to reading instruction is necessary for these learners; an instructional approach which continually loops backwards as it moves upward, to catch those readers whose reading development is delayed, to fill in the skills and strategies they may be missing, in a climate which addresses their affective needs.

Limitations of Study

- Timing: The study was undertaken at a juncture in the researcher's magistral program which coincided with the end of the school year for both participants. The intervention began three weeks prior to the summer vacation period. Though this had its benefits in that the participants' after-school commitments had finished, it did mean that the intervention was interrupted mid-way when the participants were out of town, breaking the intensity required for maximal effectiveness.
- The Teacher/Researcher desire to see the participants achieve their potential: Unfortunately, a study such as this, which has externally imposed time constraints placed upon it, does not allow for the full range of skills and strategies, in which the participant experiences difficulty, to be addressed. In effect, the researcher in this context is a co-runner in an instructional relay, who takes a turn running alongside the participant, attempting to accelerate the participant's pace of learning, to get him/her caught up with peers, to allow him/her to rejoin the race with a much improved prospect of success. When the researcher's allotted time as a "co-runner" comes to an end, the baton carrying must be shared by another. Fortunately, for the two young gentlemen who participated in this study, both have supportive and realistic parents who have taken on the role of providing the extra support their sons require to run the reading relay.

Theoretical Background of the Researcher

The researcher conducting this study was initially instructed in a teacher-training program informed by a reading philosophy which could be labelled as a purely top-down or reader-based approach which eschewed instruction that is word focused. Once situated in the teaching setting, it became apparent that this training, while superb for the provision of a highly motivating instructional program, did not provide the insight necessary for helping those who struggled with reading acquisition. This study, in part, represents a portion of the researcher's journey to understand the complexity of reading acquisition, particularly for

those who struggle in the upper elementary/intermediate grades. Appendix A provides a more detailed picture of the earlier stages of this journey.

Chapter two of this thesis presents the literature review that informed the methodology used in the intervention. It attempts to explore the research regarding the provision of intervention to learners experiencing reading difficulty. As noted earlier, the position taken as a given in this study is that an interactive processing model (Rummelhart, 1994) best explains the complexity of the reading process for all readers. To this end, research which could be categorized as either top-down (or reader-based) and bottom-up (or text-based) will be explored. The study takes the position that neither of these perspectives in and of themselves suffices in the amelioration of reading difficulty, but at the same time each perspective offers valuable insight for informing intervention methodologies.

Chapter Two: A REVIEW OF RELATED LITERATURE

Stanovich's (1986) seminal conceptualization of the cognitive and affective deficits that arise from reading failure not only brought about a paradigm shift in the way we view reading difficulty, but also shed new light on the necessity of learning to read. Not only does illiteracy have the potential to deny opportunity to those who have failed to learn in this endeavour, it appears that it may actually rob them of inherent cognitive capabilities. From this point of view, failure to learn to read is not a result of lower IQ; however, lower IQ does result from failure to learn to read (Stanovich, 1986; Siegel, 1989, cited in Torgesen, 1998). It appears to be clear: ability to reach one's full potential, particularly in Western society is intricately related to one's ability to break the written linguistic code.

To this end, there is general consensus in both the reading research field and the field of cognitive psychology that early intervention to address reading difficulties is the most efficacious means of preventing reading failure and the ensuing cognitive deficits (Clay, 1985; Hiebert & Taylor, 2000; Juel 1988, cited in Beck and Juel, 1992; Pikulski, 1994; Stanovich, 1986; among others). This proactive approach, coupled with the relative lack of success of special education programs and remedial reading programs of the past (Pikulski, 1994; Allington & Walmsley, 1995; Klenk & Kibby, 2000) may lead one to believe that when the early intervention window closes at the end of the second grade; all hope is lost for those who fail to learn to read in their early years of schooling. But is this necessarily so?

Without negating the necessity and efficacy of early intervention programs, we must be mindful that there will be children who are either missed by those attempting early identification of at-risk students, or who begin their school careers in regions where early intervention is not available, or who require continued support once they have been graduated from early intervention programs. For these children we must find a methodology which meets their need to become fluent, independent readers. For these children, we must ensure instruction in reading aimed at ameliorating the cognitive and affective deficits which grow with each year that they fail to gain proficiency with literacy. This review seeks to cover the

literature related to addressing the needs of upper elementary level students experiencing reading difficulty. Much is known about the skills and strategies of successful readers: what these readers have intuitively figured out and/or been instructed in, is that in which the struggling reader will need to be instructed. A brief look at the etiology of reading disability is first necessary followed by a discussion of traditional remediation programs and the call for reshaping the way in which we intervene with those who struggle in school. The review will then go on to look at promising late intervention programs currently in use, and seek to identify the critical components of such programs as they apply to children in grades three through six. A key underlying assumption in the position taken is that while a specific reading disability is the cause of the reading failure of some students, the majority of readers, who fail to learn to read in their early years, have not failed due to a specific reading disability or any disability for that matter: they simply have not learned to read (see Stanovich, 1986).

A Brief Exploration of the Etiology of Reading Disability

No effort has been made in this paper to separate struggling readers into categories of dyslexic and "garden variety poor readers." This has been done for a number of reasons, set out below, which argue in favour of taking a non-categorical approach to reading disability.

In a phenomenon which appears to parallel the enlargement of the learning disabled umbrella which took place in the 1970s and 1980s (Torgesen, 1998) and resulted in increasingly broader definitions of the concept of learning disability, the term dyslexia similarly came to be used for anyone experiencing reading difficulty. As the definition broadened, opinion regarding dyslexia's etiology diverged, to such a degree that "the term dyslexia has elicited many conflicting definitions and contrary hypotheses about its causes and symptoms (McCormick, 1999, p.13)." McCormick goes on to say that many researchers favour avoiding the term dyslexia and instead substitute the term *severe reading disability* (p.14). Others separate reading disability into two categories: garden variety poor readers and those with biologically based dyslexia (Stanovich, 1988) or familial dyslexia (Mann, 1998). Pressley (2002) breaks it down even

further, citing the reasons for reading difficulty as stemming from developmental dyslexia, garden-variety poor reading due to low intelligence, and thirdly, the poor reading of children with normal intelligence who "are victims of poor instruction or educational neglect (p.73)."

As these categorizations imply, the question of the etiology of reading disability is inherent to issues of definition. The question of what causes reading disability has been the subject of scientific and educational interest for more than a century and has been viewed as having a number of etiologies ranging from the medical and neurological, to the psychological and instructional. It has been seen as resulting from visual processing disorder, motor-perceptual disorder, visual-perceptual disorder, and attentional deficit (Klenk & Kibby, 2000; Torgesen, 1998). Klenk and Kibby state emphatically that each of these lines of enquiry have been discredited and remind us that reading difficulty must be viewed as having no precise etiology. However, one conclusion that seems to be gaining universal support is that reading is first and foremost a linguistic skill, and therefore many reading problems stem from language difficulties (see Mann, 1998), specifically phonological processing difficulty (see Stanovich, 1988, Adams, 1990). Recent evidence from MRI studies of the brain lends further support to this conclusion. Shaywitz et al. (1998) found differential patterns of brain activity between developmental dyslexics and non-impaired readers when engaging in phonological processing activities, particularly rhyming. They found that readers with developmental dyslexia demonstrated a functional disruption within the neural systems which link the visual representations of letters to the phonologic structures they represent (pp.2639-2640). Additionally, evidence exists that deficient phoneme awareness is the primary trait of individuals who have a family history of dyslexia (Pennington, et al., 1991). While this evidence of a cognitive basis for dyslexia does distinguish the dyslexic reader from the non-impaired reader, it must be noted that garden-variety poor readers also display difficulty with phonological processing. As Mann (1998) states: a phonological core deficit seems just as characteristic of dyslexic children as of garden variety poor readers. Stanovich's (1988) study settles this apparent difficulty by building on the work of Ellis (see Stanovich, 1988) to demonstrate that pure dyslexia (i.e. extreme difficulty with phonic reading and whole-word reading; higher

IQ) exists as an extreme of a graded continuum. The continuum demonstrates that within a population of poor readers it is impossible to find a cut-off between the garden-variety poor reader and the dyslexic reader, but shows that generally speaking, these two groups of readers exist at either end of a continuum of phonological processing ability, with pure dyslexics experiencing great difficulty with phonological processing, and garden-variety poor readers experiencing less difficulty.

The term *Phonological Core Deficit* refers to this general observation that poor readers – and children who are likely to become poor readers – tend to have problems with phoneme awareness and also with three aspects of language processing skill (Mann, 1998):

1. Speech perception under difficult listening conditions
2. Vocabulary, especially when vocabulary is measured in terms of naming ability
3. Using phonetic representation in working memory

The relationship between these difficulties: they involve phonological processes that concern the sound pattern of language. To return to the discussion of the categorization of developmental dyslexia vs. poor readers, readers from both groups display these tendencies, with the notable difference that dyslexic children have greater difficulty with rapid naming or labelling of objects.

Stemming from this discussion, it appears that it may be helpful to know the etiology of a student's reading disability, though not necessarily critical. A family history of reading difficulty based in phonological and/or visual processing deficits may be information which is used as an impetus to provide early intervention for the young child experiencing difficulty with reading acquisition. However, lack of familial history of reading difficulty would not be reason for denying early intervention to another child. If difficulties with phonemic awareness and phonetic representation in working memory are present for both developmental dyslexics and garden variety poor readers, then this is an area which must be attended to for both groups, thus negating the necessity of labelling reading disabled students, dyslexic or garden-variety poor readers, for the purposes of instruction. Instead the focus must remain on the individual student's literacy needs. An added benefit to such an approach is that seeing reading difficulty as existing

along a continuum rather than as separate categories of disorder allows us to investigate that which skilled readers employ in their reading to inform our instruction of students with reading difficulty and similarly, allows us to take what is being discovered about the remediation of those with severe reading disabilities and apply it to those with milder reading delays. Thus a wide body of literature is open to those investigating reading difficulty in its varied degrees for the development of effective reading remediation programs.

Revisioning Remediation

Following the previous discussion on reading disability and previous conceptions of its etiology, reading remediation efforts, until recently, have often been grounded in theories of learning disability which had little supporting empirical evidence (Torgesen, 1998). Stanovich (1998) states:

There has recently been an increasing recognition that the [learning disabilities] field in some sense "got ahead of itself," that educational practice simply "took off" before a thorough investigation of certain foundational assumptions had been carried out.

(p.590)

Klenk and Kibby (2000) provide an excellent overview of reading remediation in the 20th century, which supports this view. One of Klenk and Kibby's important findings is that remedial services for students are too often provided by paraprofessionals or volunteers whose paucity of training does little to help struggling readers. Students in traditional remedial programs rarely receive the type of reading instruction needed by students of all ability levels: abundant experience with text. Instead, they are frequently instructed through the use of worksheets and other isolated activities which do little to give them access to regular connected text (see also Allington, 2001; Spiegel, 1995).

The fact that at least 80% of students who have been labelled learning disabled have reading difficulties (National Center for Educational Statistics, 1994, cited in Klenk & Kibby, 2000) compounds the

problem³. Learning disabilities teachers are generally not trained as reading specialists and thus are unable to provide the knowledgeable support the majority of their students require. Students incorrectly labelled learning disabled are often subjected to training aimed at development of perceptual ability (Klenk & Kibby, 2000; Torgesen, 1998) or other forms of non-print-based instruction. When misconceptions about the nature of reading difficulties and mislabelling of reading disabled children are added to the lack of professional expertise required by children with reading difficulties, it is not surprising that efforts to remediate reading disabilities have been less than successful.

Today, it is widely accepted that most children who experience difficulty learning to read do not require instruction which is radically different from their peers; they do however, require intensified, explicit, scaffolded instruction (see Snow, Burns, & Griffin, 1998; Torgesen, 1998). Support for addressing reading difficulty in upper elementary level through developmental stages is growing. Gelzheiser and Wood (1998) summarize this view:

Because reading proficiency is acquired in stages, reading instruction must be appropriate for the student's level of performance. After individual assessment, appropriately tailored instruction will allow students to progress through the emergent literacy and beginning reading stages.

(p.337)

By finding and addressing deficiencies in students' foundational reading abilities and providing instruction which fills those early gaps or untangles those early confusions (Clay, 1985) students are enabled to better utilize and build upon their areas of reading ability. However, Alexander, Garner, Sperl, & Hare (1998) provide the important reminder that this instruction in the linguistic and metalinguistic aspects of reading must be balanced by instruction aimed at student's conceptual understanding, strategic abilities and motivation for learning.

Klenk and Kibby (2000) call for a new vision of remedial reading: proposing a "deliberate shift from the metaphor of remedy to that of mediation... (p.681)". In this shift, the teacher is not seen as someone who fixes a problem but rather as someone who mediates learning through the adoption of different roles.

³ This statistic relates to U.S. students. However, given the similarities of the Canadian and American populations, seems justifiably to pertain to Canadian school children as well.

"These roles include: modeling, encouraging, reminding, hinting, questioning, challenging, correcting, directly teaching, reteaching, reviewing..." (p.681).

Neal and Kelly (2002) describe a program which incorporates this new vision of instructing struggling readers. They make the argument for a late intervention model that closely follows Reading Recovery's early intervention methodology. They acknowledge that resources must first be applied to the prevention of reading delays through early intervention programs, noting, however, that many have not had access to such programs. They assert that as many as 10 percent of struggling students above the grade 2 level require help which is beyond the scope of improved classroom instruction, and that these difficulties lie in specific confusions related to foundational literacy. It is important, they state, that intervention not be confused with remediation. Intervention has at its crux, "the intent to bring rigor to delivering a powerful intervening instructional force into pupils' schooling designed to catch them up ... to comparable functional levels of their peers." (p.105) This concept of acceleration is that which is lacking in traditional remedial programs (Spiegel, 1995; Torgesen, 2001).

Inherent to Neal and Kelly's late intervention approach are the following assumptions:

- Teachers will be operating from ongoing insight into the individual strengths and learning needs of their students
- They will be teaching from an apprenticeship approach, which assures student success through modeling, demonstrating, and controlling task difficulty
- They will be assuring student success through appropriate selection of materials
- They will be providing teaching that is accelerative based upon an instructional focus on teaching for strategies rather than for isolated bits of knowledge
- They will be building opportunities for fluent responding into the fabric of literacy instruction
- They will be providing affirmation of success to their students

(pp.112 – 113)

This intervention takes place daily in very small groups, or more often in one-to-one tutoring sessions (due to the complexity of older students' needs), of about 30 to 45 minutes duration. In the context of regular connected reading, specific gaps in students' literacy foundations are addressed. Such an approach, implemented through trained teachers, allows for an individualized address to reading delays. These seem to be the missing factors in many remediation models. Spiegel's (1995) comparison

of Reading Recovery and traditional remedial reading programs reaches the same conclusions. This intervention approach, whether applied to an early or late intervention situation, though on the surface appearing to be costly, seems to offer more promise for targeting specific student difficulties and ending the cycle of failure which ultimately proves more costly to school systems and society in general.

While also noting that early intervention is the first line of defense to circumventing reading difficulties, Krashen and McQuillan (1998) sought to demonstrate that it is not the only possibility. Their contention: children and adults can indeed become good readers, even if they don't start reading in their early school years. The plausibility of all students using the free reading method advocated by Krashen and McQuillan to effectively close the gap created by their late start may be questionable. They also seem to gloss over the cumulative cognitive deficits (Stanovich, 1986) created by a late start to reading. Stanovich's Matthew Effects are described by Carter (1984, cited in Spiegel, 1995): children who fall behind their peers learn less and less over the years, while their peers who are successful learn more and more, continually widening the gap between the groups (p.89). Additionally, and in spite of Krashen and MacQuillan's unbridled optimism, it must be remembered that most children receive their education in large-group settings where it becomes apparent with each passing year just who is successful and who is not. This kind of competition has been widely demonstrated to have a negative effect on the child's view of himself as a reader. The point being that the later a child learns to read, the more issues of negative affect that child must overcome. Nonetheless, their stalwart conviction that late readers can become good readers and the research they use to come to that conclusion appears, otherwise, to be sound. Their proposal therefore bears some attention.

Access to a great deal of reading material, and use of high interest contextual reading in the early stages, are the cornerstones of Krashen and McQuillan's proposal, along with the provision of ample classroom time for this free reading. When surrounded by texts which they want to read, poor readers find a point of access to text, and read more frequently, texts of increasing length and level of difficulty. Literature of the popular culture genre such as the comic book series, Archie and Casper, and novel series

such as Sweet Valley Kids are written at the grade two level and provide a conduit to further more varied reading (p.416), they maintain. As evidence, they cite a study which states that boys who engage in "light reading," especially comic books, in their early reading career, go on to be "more likely to enjoy reading in general, to read more, and to read more books than boys who read fewer comic books or none at all" (p.419). Thorndike (1941, cited in Worthy, 2001) provides one possible explanation for this "...research on reading and comic books found that a student reading one comic book a month for a nine-month school year would be exposed to as many new words as reading the standard fourth or fifth grade reader."

While this view of late intervention may be simplistic and may not address the full range of needs of struggling readers, its optimism is laudable and its pedagogy sound with regard to the widely accepted notion of the necessity of engagement and extensive reading in successful literacy acquisition. Guthrie and Wigfield (2000) echo this view when they state, "engaged readers can overcome obstacles to achievement, and they can become agents of their own reading growth" (p.405). They also cite numerous studies which correlate successful readers and classrooms rich in text students find interesting (p.413). Adding to their observations about engagement and extensive reading, Guthrie and Wigfield contend that focused instruction on word recognition and fluency is present through in approach when students are presented with text matched to their level.

What is to be done, however, when this provision of high interest text does not catapult students into the circle of readers? Thus, models of intervention which include specific attention to the sub-skills of reading, such as that of Neal and Kelly are required. We turn now to a look at the specific components required for successful late intervention programs and explore some of the programs which use them.

Important Components of Successful Late Intervention Programs

Engaged Reading

While it might be plausible to assume that adult disabled readers could summon the intrinsic motivation necessary to engage in any reading program promising to "fix" their disability, parents and

teachers of students of upper elementary age must recognize the importance of reader-based considerations. What motivates the boy of 11, who simply says he hates reading, to participate in interventions which in his mind force him do something he finds odious, i.e. read, or which take away from time he could be spending in activities he perceives to be more interesting? In this student's mind, a sense of urgency is likely not present, the degree of need simply not apparent. Personal experience has shown that these students typically think of themselves as bad readers who will never become good readers; since they 'get by' in school, they are not overly alarmed by their delay. However, for those who are acquainted with Stanovich's (1996) Matthew Effect, or for the teachers and parents of these students who recognize that the child will have trouble in future educational endeavours if the reading problem is not addressed, concern is present. Taking a text-based approach to reading remediation has been shown in many cases to do little in the long run to impact these readers (Worthy, 2002). Reader based issues such as motivation to read, interest, self-perception as a reader all must also be addressed. Gauging the reader's response to the intervention becomes a critical factor. For this reason, a model which seeks to address both the text-based and reader-based issues involved in the individual's reading delay is warranted.

Guthrie and Wigfield (2000) maintain that "engaged reading is strongly associated with reading achievement" (p.404) and cite numerous studies which demonstrate this notion. They define engaged readers in the following manner: "engaged readers in the classroom or elsewhere coordinate their strategies and knowledge (cognition) within a community of literacy (social) in order to fulfill their personal goals, desires and intentions (motivation)" (p.404). Engagement in reading occurs only when all three of the cognitive, social, and motivational dimensions are present. The idea that readers who are engaged can overcome barriers to achievement, to actively promote their own reading growth (p.405), is particularly helpful to teachers addressing reading delays. It is imperative, especially with older students who have a well documented history of avoiding literacy activities due to the frustration they experience while participating in reading and writing, for a late intervention model to find ways of engaging readers.

Instructional processes impact engagement processes and learning outcomes, state Guthrie and Wigfield (2000). "They include learning and knowledge goals, real-world interactions, autonomy support, interesting texts, strategy instruction, praise and rewards, evaluation, teacher involvement, and coherence of instructional processes" (p.409). Echoing Klenk and Kibby's (2000) proposal that addressing reading delays be seen as mediation, Guthrie and Wigfield state that engagement is a mediator for instructional processes: "engagement is the avenue through which instruction impacts outcomes." It is this very idea which lends validity to Krashen and MacQuillan's afore mentioned view that texts often considered light reading provide the conduit to other reading (p.416).

Worthy, Patterson, Salas, Prater, & Turner (2002) investigated struggling readers in grades three to five, following their progress over the course of a year as they worked with reading teacher/tutors (undergraduate and graduate students). The focus of their investigation: What factors encourage resistant readers to read on their own (p.180)? The rationale for their study: time spent reading is tied to reading and writing competence, and many students who do not read in their free time eventually lose academic (Anderson, Wilson, & Fielding, 1988; Mullis, Campbell, & Farstrup, 1993, as cited in Worthy, et al. 2002) and cognitive ground (Stanovich, 1986; Cunningham & Stanovich, 1998). Worthy et al. found that while "social interaction around literacy and access to appropriate, relevant and interesting reading materials" (p.176) appeared to be necessary factors, it was the "human factor" (p.190) which was critical in motivating resistant readers to read voluntarily. Students in this study responded best when their tutors took personal responsibility for tailoring instruction to the students' needs and interests. Breaking through students' resistance required not only knowledge and skill but also, their study suggested, "responsiveness, personal knowledge, and experience that only a person with close connections to that student could provide" (p.195). These conclusions also concur with the findings of Skinner and Belmont (1993, cited in Guthrie & Wigfield, 2000), who found: "that when students perceived teachers to be involved (i.e. interested in their progress) and autonomy supportive (i.e. providing students some control of learning), students

were engaged in the classroom (i.e. participating in class discussions, actively learning, and appearing happy) (p.416).

A successful late intervention model must foster engagement through the provision of instruction that speaks to the whole child and seeks to help that child adopt behaviours and attitudes which are successful, while providing material which is interesting and accessible to the learner. This is best facilitated through an approach which is individualized and in which the child sees the teacher as personally invested.

Text Considerations

Hiebert (1999) examined three types of texts used for the instruction of beginning readers: texts based on high-frequency words; texts based on phonetically regular words; and the trade books of literature based programs. What follows from her investigation is the need for further study of text type, but she does reach the conclusion that a balanced use of all three text types is required for beginning readers. High frequency texts provide the young reader with many exposures to words with which they must gain automaticity in order to acquire the fluency necessary for text comprehension. These texts, however, focus children's attention away from "common and consistent patterns in English" (p.555) as so many high-frequency words contain unique spelling patterns. Phonetically regular text such as that found in decodable texts help children recognize, utilize and transfer knowledge of regular English spelling patterns, but have the disadvantage of not being an accurate reflection of natural speech. These books, therefore, tend to inhibit the child's ability to apply useful syntactic knowledge and contextual cues to his/her reading. Trade books nicely fill this need for naturalistic language and predictability of text structure (p.558) but substantially increase the number of unique words children must read (Hoffman et al., 1994, cited in Hiebert, 1999). In essence, children using these books are "seeing more words, and ... seeing them less frequently" (p.558), inhibiting the acquisition of automaticity.

While Hiebert's attention was focused on children in the early stages of reading instruction, her point of ensuring that readers receive a "balanced diet" (p.552) in their early experience with text holds true

for struggling readers. It has been widely demonstrated that these readers generally are not disabled in some manner which renders them unable to read, rather they possess gaps and confusions in their reading knowledge which have precluded reading success (see Klenk & Kibby, 2000). While struggling readers' gaps or confusions may be best addressed by one type of text, and that text-type may need to be given more attention, these readers have the same requirements as new readers: they must come to read independently. Use of all three text types to provide a strong base may be a necessary ingredient for a foundation which leads to independent reading.

In addition to text type, the issue of text level or readability must be taken into consideration when providing intervention to struggling readers. Poor readers routinely appear to have little sense about whether a text is adequately matched to their reading ability (Worthy, 2001). Perhaps they are choosing texts which are too difficult because of what they perceive to be appropriate for "good" readers. Could they be making their choices based on what their peers are reading? Or could they simply be frustrated with having to stay with the "baby books?" Perhaps they intuitively know that text must convey meaning and look to more difficult texts to find the meaning they are not getting from the texts at their level. Or perhaps they simply want variety, and the limited book collections of many classrooms and schools do not provide them with enough text at their level to give them the practice they require to gain fluency. Allington (2002) cites Swanson and Hoskyn's (1998) meta-analysis, which found that for learning disabled students, three main factors contributed to their achievement, one of these being control of task difficulty: when students were given tasks that were difficult, achievement was seriously compromised. Worthy, et al. (2002) found that "while every student had adequate or even abundant access to books either through school or their homes, most needed more appropriate books as well as assistance in developing the skills to choose and read books that were both interesting and manageable" (pp. 188-189). Any program which seeks to provide intervention for struggling readers must have access to a great variety of text which provides multi-levelled reading on topics of interest to young readers, in addition to helping these students locate text which they can handle without frustration.

Following from the earlier discussion of motivation, it is important for teachers to locate texts which children want to read. This is taken as a given in this section of the importance of text selection for struggling readers. Allington (2001) notes that magazines are not often found in classroom reading collections and advocates for a rich supply of magazines as a staple in elementary school classrooms. He references the fact that fourth grade students who achieved above the national average indicated that they regularly read narrative fiction, informational books and magazines (Foertsch, 1992, cited in Allington, 2001). Could introducing struggling readers to popular literature in the form of children's informational magazines be an important motivational component by providing authentic materials which provide real reasons for reading?

Stahl (1994) raises an interesting point with regard to text type. In his investigation of the unprecedented acceptance of the whole language movement, Stahl notes that the literature-based framework of whole language and its stress on "the personal response of individuals to quality literature" (p.18) stresses aesthetic reading and gives young children little experience with expository or content area books: the trend toward presenting content through narrative text compounds this effect. When these children move into the intermediate grades they experience tremendous difficulty handling the emphasis on information retrieval which characterizes upper levels of education. Expository reading of expository text requires students to handle text structures and vocabulary they may be completely unfamiliar with when taught to read solely through a literature-based approach: this may be the reason so many children's reading difficulties are detected in the middle school years when this type of reading becomes a regular part of most curricula and employs text written at a level beyond struggling readers independent (and often frustration) level.

While it follows that content area reading of simple expository text should be introduced early to young readers, the scarcity of informational texts in lower elementary classrooms continues to be an issue, despite a sizeable body of literature advocating its early introduction (Duke, 1999). It thus follows that this type of text is that with which struggling readers will consistently require help. Gaffney, Methven, and

Bagdasarian (2002) make the case for the use of expository text in late interventions with struggling readers. A one-to-one tutorial arrangement was employed and students met daily with their tutors for 30 minute sessions. The use of expository text enabled these researchers to help students successfully approach a text-type they had previously been unsuccessful with through a scaffolded tutorial setting. Additionally, it provided students with the strategies they needed to handle the type of reading required of them in their classroom setting and perhaps circumvented the failure cycle they had experienced with narrative text.

A successful late intervention model for struggling readers will use text types which enable students to address their need for phonic skill, automaticity with sight word vocabulary, and development of context based cue skills. Careful monitoring of text level will also be present in order to ensure the daily success needed to break the failure cycle. While mindful of the need to provide text which is interesting and motivating to the learner, it will also use text which enables the learner to broaden the scope of his/her reading by scaffolding the ability to deal with new text types such as expository text.

Oral Reading

What is the role of oral reading in reading instruction and how does it fit into reading interventions with upper elementary students experiencing reading difficulty? Durkin (1978) notes that oral reading and silent reading are not the same qualitatively. The key differences she notes:

Oral reading:

- Attention to correct pronunciations is required
- Careful enunciation is essential
- Expression and appropriate volume must be considered

Silent reading

- Translation of written words without pronouncing the words
- Devoid of vocalization and subvocalization

(pp.21-24)

Durkin argues that these differences have profound implications for reading instruction: for students who do not learn to move beyond the vocalization and subvocalization of words do not progress to mastery in silent reading and thus there is a need to give the most instructional time to silent reading. Secondly, she

maintains, subvocalization places more demands on the reader's memory, complicating comprehension. A third area of caution regarding oral reading has to do with eye movements. Durkin cites Gibson and Levin's (1975) research on eye movements in oral reading which showed that since the time needed to pronounce and carefully enunciate each word in oral reading takes more time than the eye actually requires to span the same text, difficulties arise when readers must follow along silently while one reader reads aloud. She states that this is one of the key difficulties with round robin reading procedures: The child reading orally is necessarily reading more slowly than the children who are reading along silently as they await their turn for oral reading. Among other problems with round-robin reading, she raises the possibility that through these procedures children learn to subvocalize all material they are reading silently, when they actually need to be progressing to rapid unsubvocalized reading for "easy" reading, reserving subvocalization for more difficult passages which require more attention to each individual word (p.528). It is interesting that although Durkin made the case over three decades ago for a cessation to the practice of round-robin reading, or unrehearsed oral reading, it continues to have its place in some classrooms, sometimes under its alias, popcorn reading (Worthy, 2002). Hoffman and Issacs (1991) found that in the groups of second grade readers of low reading ability that they observed, two-thirds of students' reading time was devoted to the practice of round-robin reading. Not only does round-robin reading place undue emphasis on accuracy over the construction of meaning (Worthy, Broaddus, & Ivey, 2001), it becomes a public showcase for the struggling reader's difficulties. Unrehearsed oral reading in front of others becomes even more problematic as the child experiencing reading difficulty progresses through school, for with each passing year the child's delay becomes more and more apparent to him/herself and to others. The very thing so many struggling readers want to avoid is oral reading activity which might highlight their struggle. The use of unrehearsed oral reading of textbooks with their new vocabulary and unfamiliar format, common in upper elementary classrooms (Worthy, 2002), puts struggling readers in position for failure on every occasion it is employed.

The above highlights the dangers of some oral reading practices, yet oral reading is nonetheless widely mentioned in the literature as a component of literacy interventions. Apart from the obvious fact that it is difficult indeed for the student to be evaluated on measures of word recognition, decoding or fluency when s/he is reading silently, of what value is the procedure?

The arguments set out above have been important to the re-thinking of classroom reading instructional processes; however, the effect on some instructional practice may have been excessive, creating classrooms where reading aloud is rarely, if ever, practiced (Worthy & Broaddus, 2002). This has important implications for children first gaining control over the reading process as it leaves them little time to experience the benefits of reading aloud. They have little experience developing fluency, and attention to pronunciation and enunciation are lacking. While Durkin's argument set out earlier cautions against getting students stuck in the vocalization/subvocalization mode, equally compelling is the opposite situation when low-achieving students are not given enough time with this slower approach to reading. Word learning suffers when students do not have adequate early experience with oral reading as the process of reading aloud necessarily forces the focus on words for longer periods of time (even if we are speaking in terms of nanoseconds) than silent reading requires. These extra nanoseconds may make a difference in solid word learning for emerging readers and struggling readers who require more exposure to words to gain automaticity (Ehri, 1994, Samuels & Flor, 1997). Thus oral reading has an important place in word learning.

Additionally, oral reading is an essential element of fluency development of struggling readers in that hearing students read allows teachers to provide corrective feedback found in many studies to be critical to the effectiveness of fluency training (see Chard, Vaughn and Tyler, 2002).

Adams (1990) demonstrates oral reading's effect on sentence memory or what others term working memory (Swanson, Cooney, & O'Shaughnessy, 1998). She summarizes the process: "By speaking or thinking the spoken images of the words to ourselves, we effectively renew their phonological activation, thus extending the longevity and holding capacity of our verbatim memory" (p.188). Deficiency in working

memory is a frequently noted amongst those with learning disabilities, and among struggling readers (Swanson, Cooney, & O'Shaughnessy, 1998), thus oral reading may provide an important vehicle for addressing a pressing need in this population.

Finally, oral reading has its place in fostering reading comprehension. Schreiber (1991) highlights prosody's role in reading acquisition and while much of his work regarding prosody points to the efficacy of repeated reading in helping students gain control of phrasing to gain fluency, it also points to the fact that students must engage in oral reading (as well as listening to competent models of fluent reading) in order to move beyond word-by-word reading to appropriately phrased reading. Schreiber contends that while children naturally use prosody to process these meaning strings in spoken language, it is not necessarily a skill which they transfer to their reading: many must be shown explicitly how to group words so that fluency and comprehension are fostered. When engaging in oral reading, attention to appropriate emphasis and expression is encouraged: in giving attention to these prosodic features in their reading, students find the phrase and sentence boundaries important to adequate text comprehension. His suggestion is supported by Adams' (1990) observation that text comprehension in skilled readers best takes place when the recoding of individual words for overall comprehension is completed at the boundaries between sentences or whole clauses (p.186). Anderson and Roit (1993) also note the correlation between oral reading and comprehension in reading intervention. They refer to findings that for beginning readers, problem readers and readers dealing with difficult text, oral reading appears to increase reading comprehension (Wilkinson, Wardrop, & Anderson, 1988, cited in Anderson & Roit, 1993). Reutzel and Hollingsworth's (1993) study in addition to Rasinki and Zutell's 1991 study, both indicate the benefits of fluency training using oral reading on developing readers' comprehension skills. Use of oral reading, then, at the early stages of reading, may help students who have not naturally learned to process text in chunks larger than individual words, and its judicious use is thus also advocated for addressing the needs of struggling readers.

Arguments such as these demonstrate that not only should oral reading be restored to a place where it is incorporated in classroom instruction, but also show that the use of oral reading in the remediation of

reading disability is warranted. How then does the need for oral reading practice to develop fluency, balanced with students' affective needs, find a place in the regular classroom and in reading intervention situations? Several excellent suggestions have emerged:

- *Choral reading* has been widely used in lower primary grades to provide oral reading support for the more reluctant reader.
- Many have also employed the use of *Reader's Theatre* to address this problem. In *Reader's Theatre*, students take stories they have been reading, assign parts to various members of a group, and then practice reading the text together until it is in a "presentable" form for the rest of the class to observe. This activity not only provides an opportunity for students to develop confidence in front of large groups, but also provides developing readers with the practice they need for word learning and the use of prosody as delineated by the text's punctuation. (see Worthy, 2002)
- Yopp and Yopp (2003) also highlight three practices which provide meaningful opportunity for developing fluency. In an activity they call *Book Bits*, students are given excerpts from books they will soon be reading. After practicing these excerpts (with assistance, if required), they write a prediction of the text. They then circulate amongst themselves, reading their excerpts, and listening to the excerpts of other students. After hearing several excerpts they return to their own prediction to revise based on what they have heard.
- A second activity, called *Powerful Passages* (Yopp & Yopp, 2003), has the students find a passage from a book they have just read which they have found to be meaningful. The passages are written out, students practice their passage (with support, if necessary) and then circulate, reading their passages and giving commentary to a series of partners.
- *Poetry Reconstruction* (Yopp & Yopp, 2003) has students reconstructing an unfamiliar poem which has been printed on large strips and cut into phrases. Students are left to devise their own

method for reconstructing the poem, and generally used reading aloud and re-reading aloud to test their versions until they found one with which they were content.

While these methods may not be those which are consistently used in intervention situations due to time constraints, they definitely supply the kind of support and motivation to re-read which struggling readers require and should be considered important activities for the struggling reader to engage in within the regular classroom to enhance fluency work taking place in the remedial setting and to capitalize on the benefits of oral reading. The critical elements in each of these practices: students are given the opportunity to rehearse the reading before the "performance" takes place, with support, when necessary; and they are given real reasons for engaging in the repeated reading. The role of repeated reading in the development of word learning has been shown to be valuable for struggling readers and shall be further examined below.

Word Learning

The need for fluency development with struggling readers has been previously alluded to in this review. Clay (1985) and Allington (2001) note that fluency difficulty is prominent with many struggling readers. Renewed interest in the reading research field regarding fluency instruction for students beyond the lower elementary grades began in the 1980s stemming from the work of LaBerge and Samuels (1974, cited in Samuels, 2002). At that time dedicated fluency instruction was rarely found in classrooms or even in intervention programs, and the trend has continued (Allington, 1983; Zutell & Rasinski, 1991; National Reading Panel, 2000). The explanation for this under-use of fluency instruction may in part be explained by the move away from oral reading in the classroom as discussed earlier, and in greater part by difficulties associated with purely bottom-up or text-based approaches to reading instruction.

Fluency is widely assumed to refer to rate and accuracy of reading, and the investigation of fluency in the literature often focuses on word recognition. Stanovich (1991) cites numerous studies which support the foundational importance of word recognition in the reading process. Lack of skill in word recognition is seen by many as a reasonable predictor of difficulties in reading comprehension ability (see

Pearson, 1984; Stanovich, 1991). Stanovich (1991) also maintains, skill at recognizing words is strongly related to the speed of initial reading acquisition, so much so that the development of word recognition skill leads to reading comprehension ability (p.418). Adams (1994) echoes these assertions when she cites a large body of research which indicates that difficulties at the letter- and word-recognition level are the single most pervasive and debilitating cause of reading disability (p.848). Observing that it is an enormous task for young learners to internalize the thousands of words required of fluent readers, Adams recommends the following activities as supportive of those in the beginning stages of reading acquisition: writing, spelling, and phonics instruction, patience, encouragement, and lots of beneath-frustration-level reading and rereading (p.848). While recognizing that some of the viewpoints discussed here represent purely bottom-up approaches to reading instruction, they may be viewed in light of Chall's (1983) contention that in the early stages of reading development children must spend a period of time "glued to the print" in order to later be freed from the print. Additionally, it could be argued that lack of automatic recognition of letters within a word or lack of automaticity with sight vocabulary has children processing at the feature, letter, letter-cluster or lexical level of Rumelhart's (1994) interactive conception of the reading process, and not orchestrating those levels of processing with the syntactic and semantic levels.

Samuels and Flor's (1997) study highlighted automaticity's central role in developing reading expertise: The central premise being that when a child has developed automaticity with a word it is better retained in long term memory, requiring less cognitive attention and leaving an attentional reserve for tasks such as comprehension. They point out that it is important to distinguish between accuracy and automaticity. At the point where the student is beginning to reach high levels of accuracy in word recognition, there still exists a high attentional demand. It is not until the student has overlearned the word that the attentional demand decreases. Samuels' (2002) work on fluency leads to the conclusion that readers have achieved fluency at a particular reading level when they are able to handle the dual attentional tasks of whole word decoding and comprehension simultaneously. While much attention has

been given here to word recognition, it is important to note, that this fluency is best achieved through extensive reading, with repeated readings of text seen as very helpful to emergent and struggling readers (Clay, 1985; Samuels, 2002). The findings of Fleisher et al. (1979) underscores this qualification: their work demonstrated the importance of contextualized fluency training with their finding that for poor readers, training in automatic recognition of isolated words had little impact on reading comprehension.

Rasinski (2001) compared two groups of grade three students of mixed reading ability (though most of the students were of high and average reading ability) in his study on variations of repeated reading and their role in fluency training. Essentially, one group read and re-read a passage four times over four days, while one group did the reading on days 1 and 4, and listened to the teacher reading the passage while following along in the text on days 2 and 3. Both groups were pre-tested and post-tested on day 1 and day 4 respectively. In a second cycle, the groups were switched. He found little difference between the re-reading only treatment and the repeated listening-while-reading treatment on reading rate or accuracy. He concluded that neither could be noted as superior in and of itself. However, he hypothesized that employing listening-while-reading method to repeated reading could be a variation on repeated reading which would keep the practice fresh for students. He also postulated that if teachers provide a fluent model for students on the first reading of a passage, efficiency would be increased as the child does not have to struggle through the first reading on his/her own. He suggested that this model would serve the struggling reader well.

In their meta-analysis of fluency interventions with learning disabled students, Chard, Vaughn and Tyler (2002) found evidence to support Rasinski's suggestion: the greatest gains in reading speed and accuracy for learning disabled students were made using fluency training which included a fluent reader modelling the reading of a passage with the disabled reader following along in the text (listening previewing). Readers then went on to engage in repeated reading of the passage. The meta-analysis also suggested that a minimum of three readings (one of which included the listening to a fluent reader)

was necessary to achieve the benefits of repeated reading, that corrective feedback be supplied to the student and that criteria for increasing text difficulty be clearly delineated.

Are children simply pushed too fast and not given the time they need to develop automaticity of word recognition or the time they require for consolidating the decoding skills and context use strategies they have so recently begun to coordinate (Chall, 1983)? It appears that this may be a key factor in the failure to lay a strong early reading foundation in so many children, leading to the difficulties with content text which manifest in the upper elementary years. If this is so, the need to close this fluency gap for struggling readers is a crucial area late interventions must address, in addition to instruction designed to strengthen phonemic awareness as we shall see in the next section.

Attention to Phonological Awareness

Phonological awareness, phonemic awareness and phonics instruction have for several years been "hot topics" in literacy research. Taylor, Pearson, Peterson, & Rodríguez' (2003) study investigating teacher practice which promotes literacy learning found that the more explicit phonics skill instruction was employed in upper elementary grades, the lower the growth in reading achievement, especially fluency. The explanation that most of the students being investigated were already adequate decoders and thus not in need of phonic instruction, suggested overuse of phonics in the general classroom at this level promoted disengagement in literacy learning. Does this finding warrant the cessation of activities which promote phonemic awareness in older students who struggle with decoding? Not necessarily, but it does provide a necessary note of caution for those working with struggling readers and a reminder that phonic instruction must not replace or overshadow regular connected reading of text which the extant literature unanimously supports as key to the development of all readers.

The role of a pervasive phonological core deficit in many struggling readers, discussed earlier, suggests that addressing difficulties at the sound-symbol level may be necessary with some older delayed readers. Adams (1994) meta-analysis contends that not only is difficulty at the word-recognition level a leading cause of reading delay, difficulty at the letter-recognition level is significant as well. While for some

the difficulty may lie with simply having incomplete orthographic knowledge at the single-letter level, for many the difficulty lies in incomplete knowledge of likely letter combinations.

The axiomatic principle that instruction in one strand of literacy (listening, speaking, reading, and writing) is enhanced through instruction in the other strands is one which is particularly helpful to emergent readers: understanding the ways in which sounds and letters go together in writing, helps the reader in the reading decoding process, and vice-versa. In his review of early intervention programs, Pikulsky (1994) notes that writing is a key component to all successful early intervention programs. Reading Recovery capitalizes on the connection between reading and writing. Each daily session includes a short writing session which takes what the child already knows about the orthography and through scaffolded instruction leads the child to increasingly more sophisticated and conventional spelling. Adams (1990) reviewed the literature regarding invented spelling and concluded that it serves the emergent reader well in the long run. This is especially true for low-readiness children, she maintains: "those who had been in ... invented spelling classrooms significantly outperformed their traditionally instructed peers on the majority of spelling and word recognition posttests (p.385). Beyond the emergent stage, however, she argues for necessity of spelling instruction. Drawing on her interactive model (p.395) she explains the interconnectedness between spelling and reading development:

The arguments for including spelling instruction as a major component of the reading and language program are strong. As learning about spelling serves to elaborate and reinforce knowledge in the Orthographic processor, it enhances reading proficiency. As it articulates with knowledge in the Phonological processor, it enhances children's ability not just to induce spellings and to render correct spellings of unknown words but also to hear and pronounce words correctly in their oral language activities. Finally, learning about correct spellings may also be a key factor in children's development of morphemic awareness.

(p.404)

Pogorzelski and Wheldall (2002) found significant gains in single word recognition and oral reading fluency, in older low-progress readers, when phonological awareness training was included as a portion of the intervention (described below) in which these readers were engaged. The readers were divided into

two groups: those who were dyslexic (as defined by extreme phonological processing difficulty) and those who were simply delayed readers. They had expected the dyslexic readers to make smaller gains than the non-dyslexic readers in word recognition and oral reading fluency through the intervention. This was not the case, however. Both groups of readers made significant gains. In this program, the readers, who were approximately four years delayed in their reading, attended an intensive reading program 4 hours per day, 5 days a week, for approximately 2 months. A portion of the program involved individual work, a portion involved group instruction, and each reader received a half-hour per day of individual reading instruction. A small portion of both the group instruction and the individual instruction included phonological awareness training. Students who displayed the lowest phonological awareness received an extra 5 minutes per day of training in auditory analysis, where they orally/aurally learned to discriminate and manipulate phonemes. That both groups of low-progress readers, the dyslexic group and the delayed readers group, responded to the treatment supports two theories:

1. A non-categorical treatment of dyslexic readers is an appropriate mode of intervention when,
2. phonological awareness training paired with letter-sound manipulation to address the core-deficit in phonological processing skills of the dyslexic reader is included in the intervention.

(Pogorzelski and Wheldall, 2002)

Torgesen's (2001) work with disabled readers, aged eight through ten, found similar results. The study employed two methods of phonemic awareness training embedded in an intensive one-to-one tutorial reading program, conducted in fifty minute sessions, twice daily for eight weeks. While their fluency was unaffected by the intervention, students instructed with both methods of phonemic awareness training made significant gains in reading accuracy and comprehension, gains which remained stable when the participants were re-tested two years later. Key to the intervention's success were explicit instruction in phonemic awareness, phonemic decoding and sight word recognition skills, using a scaffolded instructional approach.

In keeping with this research, it appears that late intervention approaches should incorporate instruction which emphasizes simultaneous attention to reading and writing, and provides explicit

instruction in phonological and/or phonemic awareness skills, though it seems logical to ensure that level of difficulty in the area of phonological processing be determined and used as a guide for the extent of this type of instruction. Strickland (2000) provides a helpful framework for addressing the needs of children experiencing reading difficulty which may be extended to late intervention models: not only do these children need daily experience teacher read-alouds, shared reading, guided reading, and independent reading; they also require daily, teacher-led, work with word study. This word study for learners reading below the preprimer level would include oral activities which foster phonemic awareness. At the primer level and above, attention must be given to phonics, structural analysis, and sight vocabulary (p.105). She cautions that this work needs to be accomplished through a wide range of materials and not simply through worksheets and workbooks (p.104). Ehri and Nunes' (2002) meta-analysis suggests that focusing phonemic awareness instructional time on segmenting and blending contributes most significantly to beginning level reading skill (p.120), and is most effective when the instruction involves the manipulation of letters (p.132). Cunningham and Cunningham's (2002) "Making Words" provides an excellent approach to the systematic and meaningful teaching of phonics and has been successfully used with struggling readers (Short, Kane, & Peeling, 2000).

Including a written component in a successful late intervention program then has a two-fold outcome: using the natural link between reading and writing not only allows the two processes to scaffold each other at the grapheme-phoneme level of literacy, but also helps the disabled reader develop cognitive clarity regarding the goal of becoming adept with both strands (Cunningham & Cunningham, 2002). When phonologically-based approaches to interventions are combined with strategically-based approaches (as explored further on in this review), superior outcomes have been achieved (Lovett, et al., 2000).

Comprehension Instruction

That the ultimate goal of all reading, and reading instruction, must be meaning-making or comprehension is taken as implicit in this review. It is argued that instructional attention given to the

following, each discussed earlier in the review, will set in place the necessary foundation for deeper comprehension instruction:

- Word recognition: in accordance with findings discussed earlier that show improvement in contextual automatic word recognition improves comprehension through the freeing of attentional reserves (Fleisher, et al., 1979; Reutzel & Hollingsworth, 1993; Samuels & Flor, 1997; Nathan & Stanovich, 2001).
- Comprehension at the semantic level: through fluency training designed to highlight prosodic features of text, the student begins to process increasingly larger "chunks" of text, processing text at the phrase and sentence level where it is argued that overall comprehension best takes place (Adams, 1990; Shreiber, 1991). This type of comprehension at this level encourages the student to move toward a semantic level of comprehension monitoring (addressed below) (Baker, 1985, cited in Alexander et al., 1998).

However, as Pressley (2002) notes, although word-level comprehension is facilitated by automatic decoding, comprehension beyond the word level requires far more than word recognition skill. For many children experiencing reading difficulty, comprehension is equated with decoding (Alexander et al., 1998). Baker's proposal that children evaluate their comprehension using three different standards: lexical, syntactic, and semantic, is helpful for understanding this phenomenon. The lexical standard directs attention to the individual word, requiring little attention to context. The syntactic standard requires sensitivity to grammatical constraints. And the semantic standard requires that attention be directed to sentences and the surrounding context. It is through the application of the semantic standard that text is thoroughly processed and higher level comprehension takes place. Upper elementary students who experience reading difficulty must be led to apply a semantic standard of evaluation to their reading. (Baker, 1985, cited in Alexander et al., 1998). Engaged reading is one means of addressing this difficulty. By ensuring provision of materials which are engaging to readers, the critical engagement necessary for effective comprehension of text is fostered (Guthrie & Wigfield, 1997; Millard, 1997; Krashen & McQuillan

1998). Higher level questioning is also required. By engaging readers in discussion of the text which goes beyond factual recall, comprehension of text is enhanced (Taylor, et al. 2003).

Teaching reading comprehension to struggling readers also leads them to move beyond the lexical and syntactic level of comprehension. Pearson (1984) states that reading comprehension is influenced by: content factors, such as world knowledge and knowledge about textual organization; and process factors, such as attention, encoding, inference, retrieval, and executive monitoring. His argument for direct explicit teaching of reading comprehension, based on these findings about comprehension and research which points to the benefits of well-organized, systematic instruction (Pearson, 1984), launched an era of research into instruction designed to specifically address application of strategies for enhancing learning (Pressley, 2002; Duke & Pearson, 2002). It is in this area of strategy instruction that most of the recent comprehension research has focussed. As will become obvious in the section to follow, just as reading comprehension instruction is bound up in reading skill and engagement; it is also inextricably tied into strategy instruction.

Comprehension Strategies

This review has up until this point focused on affective issues related to reading, and skills required for successful reading acquisition. A third area where those experiencing reading difficulty require explicit instruction is metacognition or executive control, most specifically in the area of strategy use. Good readers are portrayed as active learners who direct their own cognitive resources to learn from text (Garner, 1994). While poor readers often fail to develop spontaneous strategy use, a growing body of empirical evidence seems to be demonstrating that strategy use may be developed in poor readers through instruction.

A plethora of research has recently been generated in the area of strategy instruction (see Swanson, Cooney, & O'Shaughnessy, 1998). The sheer magnitude of strategy research and recommendations regarding strategy instruction have prompted some to caution that it is better to instruct students in a few strategies well, rather than many superficially. For the purposes of this review Alexander

et al.'s (1998) conceptualization of three core strategies which must be fostered in students with reading difficulty is taken as a guiding principle. These core strategies are: knowledge activation; self-interrogation; and summarization. Key to effective strategy instructional programs are the following: teaching a few strategies well; teaching students to monitor their performance; teaching students when and where to use the strategy to enhance generalization to other applications; teaching strategies as an integrated part of an existing curriculum; providing plenty of supervised student practice and feedback (Swanson, Cooney, & O'Shaughnessy, 1998). Dole, Brown, & Trathen (1996) and Butler (1998b) also mention the efficacy of personalizing or fostering student ownership of strategies by building on strategies students already employ, and having students articulate strategies which might potentially be useful to the particular reading situation, prior to reading (as opposed to the teacher telling the student which strategies to apply).

Self-interrogation or self-monitoring appears to be the key strategy necessary for overcoming some of the prevalent "poor habits" of struggling readers. Garner (1994) notes that two of the most replicated findings in the area of metacognition and reading are that young readers and poor readers have little awareness of the need to make sense of the text they read: their focus is on the decoding process and not on the making of meaning (p.727). And secondly, they seem not to be cognizant of instances when they do not understand (p.728). Paris, Lipson and Wixson (1994) note that poor readers generally correct a smaller proportion of their oral reading errors than proficient readers do. Whether the central lack of awareness is the cause of these poor reading habits, or the result of it, is unclear. For some children the difficulty may lie in poor working memory and an inability to hold strings of words long enough for effective processing (Adams, 1990; Mann, 1998). Regardless, without this self-monitoring (or self-interrogation), ability to apply the other two core strategies, knowledge activation and summarization appears to be compromised. Butler & Winne (1995, cited in Butler, 1998b) describe monitoring as the "hub of self-regulated task engagement" (p164). This highlights the notion that the central goal of strategy

instruction in reading interventions must be tied into the primary goal of all reading: meaning making, but also demonstrates the importance of guiding students to become self-monitoring.

Two highly effective programs geared toward strategy development in elementary school children with reading difficulty are found in the Benchmark school and in the Reading Recovery program. Gaskins (1998) discusses the evolution of the Benchmark School's program for disabled readers. One of the findings at Benchmark was that children who graduated from their program were reported as employing unproductive learning strategies for learning, remembering and assignment completion (p.215). Similar findings emerge from analysis of the efficacy of traditional remedial reading programs (Klenk & Kibby, 2000; Spiegel, 1995).

Through intensive research and collaboration with experts in the field, Benchmark developed its own comprehensive strategies instructional program (Gaskins,1988 cited in Gaskins, 1998). Middle school students were taught to monitor their learning behaviour through an introductory Psychology course; the success of this course led to another called, Thinking and Learning, geared to lower school students. These courses provided the motivation and common language needed to begin strategies instruction. Benchmark School strategy instruction started out with:

- Surveying, predicting, and setting purposes for reading
- Identifying key elements in fiction – characters, setting, central story problem, and resolution
- Summarizing key elements

Subsequently, Benchmark strategy instruction grew to include:

- Accessing background knowledge
- Making inferences.
- Monitoring for understanding and taking remedial action when necessary
- Noticing patterns in text
- Identifying main ideas in non-fiction
- Organizing information
- Summarizing non-fiction in one's own words
- Analyzing and taking charge of tasks

(p.217)

Gaskins reports that follow-up research found that students who received several years of strategy instruction made significant progress in understanding what they read when compared to the comparison

group who received no strategy instruction. These results were consistent on both reading achievement tests and performance based tests in social studies (Gaskins, 1994 cited in Gaskins, 1998, p.217). Additionally, and arguably most important, those who had 4 to 5 years of this instruction tended to thrive in their regular school placements once they left Benchmark (p.217).

Similarly, strategy development is key to Reading Recovery which grew out Marie Clay's review of remedial reading programs. She observed that the majority of students who entered remediation programs never left and hypothesized that they developed dependency behaviours which resulted in little or no growth if they did leave. From this grew the Reading Recovery program focused on reading strategies whose goal it was to produce independent, self-monitoring readers (Short, 1991, pp. 98 - 99). General strategies which are encouraged in Reading Recovery lessons include: self-monitoring; and searching for cues. Specifically, through conversations about reading, students are led to:

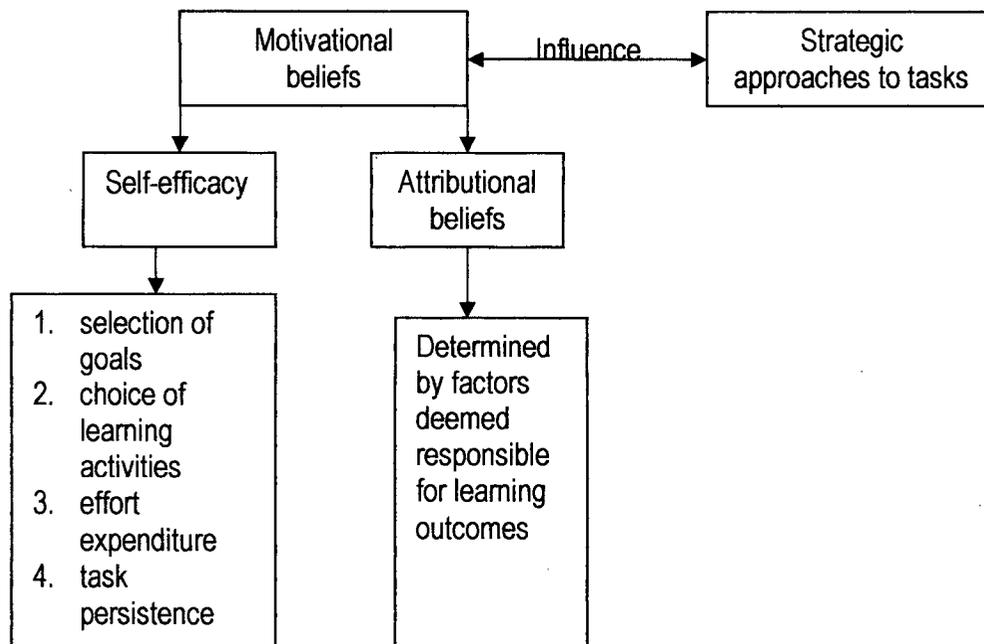
- Notice visual features of words
 - Identify particular sentence patterns and language structures
 - Focus on whether or not the text is making sense
 - Use the pictures to establish a meaning focus
 - Make connections to past experience and other texts
 - Discuss the use of several information sources at once
- (Short, 1991, p.99)

Particular reading behaviours are also encouraged. These include:

- Re-reading to get another running start
 - Looking through the text and pictures to get a frame for the story
 - Making predictions about the story content before reading
 - Using the cover of the book to review the story before re-reading
 - Reading or glancing ahead to the end of a sentence or section
 - Reading with the tutor to gain momentum and fluency
- (Short, 1991, p.99)

A key to the success of Reading Recovery is the goal of orchestrating these reading strategies and behaviours to the point where they become an automatic part of the student's reading. Though the Reading Recovery model was designed for early intervention, it is well-documented that older struggling readers often develop a self-perception which attributes reading difficulty to lack of personal ability (Diener & Dweck, 1978; Fowler & Peterson, 1981; Johnston & Winograd, 1985; Licht & Dweck, 1984; Torgesen &

Lict, 1983, cited in Stanovich, 1986). These readers therefore need to be taught the self-monitoring strategies advocated by Clay and Gaskins, among others, in order to understand that their difficulty lies in their methodology and not in their ability. Butler (1998a) discusses this strong relationship between the reader's motivational beliefs regarding self-efficacy and attribution and the strategic approaches applied to tasks. One of Butler's key findings was that when motivational beliefs are addressed, the ability to become a self-regulated learner who orchestrates an effective set of learning strategies is fostered (Butler, 1998b). The following diagram, based on Butler's (1998a) work demonstrates the influence of motivational beliefs on strategy use:



The present discussion takes this literature review full circle to the issues of motivation first discussed as an important component of effective intervention programs for struggling readers and highlights an important principle: the needs of struggling readers are complex and interrelated. While the review has attempted to tease apart that which is necessary, an effective program is one which finds a means of integrating motivation, skills and strategies into a meaningful and cohesive whole.

Gender Considerations

Any discussion of appropriate interventions for students experiencing reading difficulty must address gender. That gender differences are present in the reading achievement of both elementary and secondary school students is now a widely recognized conclusion. While developing nations display the opposite trend (UNICEF, 1999), statistics from developed nations show a tendency for boys to seriously lag behind girls in their reading achievement (Elley, 1992; Wagemaker, 1996, both cited in Gambell & Hunter, 2000). Some studies have shown that boys outnumber girls by three to one in programs for struggling readers (Bader & Wiesendanger, 1986, cited in McCormick, 1999). Why is this so?

In a Canadian study of gender differences in school literacy, Gambell and Hunter (2000) discuss current explanations related to gender differences in reading achievement. They characterize these explanations as belonging to five different models: division of family labour; character-personification; classroom interaction; assessment bias; and identification with genre; three of which are relevant to this review. In brief, the relevant explanatory models are as follows:

- The Division of Family Labour model suggests that children reproduce their home experiences in their school literacy learning. Females provide the balance of literacy instruction in the home and early schooling and students therefore learn to perceive reading as a female activity. As boys construct their gender identity in the early school years, they learn to shun literacy as they distance themselves from that which is female. (Solsken, 1993)
- The Classroom Interaction model states that females are allowed more emotional latitude in the classroom. Boys, whose emotive behaviour is considered negative by classroom teachers, are thus socialized to obliterate from their behaviour, emotions and tastes, anything which may be considered female. At the same time males are encouraged to harness their emotion in physical education or afterschool sporting activities, while females are encouraged to express and explore their emotions through literacy activity (Best, 1983). Elley (1992) notes that the gender gap in literacy achievement is highest in countries which have high proportions of female teachers.

- The Identification with Genre model implies that students identify more with the text than with the characters within the narrative or with the teacher teaching the text. Girls are more likely to choose literature based on recommendations of friends, family and teachers, whereas boys were more likely to base their reading choices on genre. Girls tend to respond to characters in the books they read; boys to the plot. Girls read more and read narrative fiction almost exclusively; boys read less, but read a wider variety of genres. Much of the reading that is valued by teachers in the elementary classroom is narrative, the genre boys are least likely to be reading (Simpson, 1996).

(All of the above cited in Gambell & Hunter, 2000)

Gambell and Hunter found that significant gender differences are evident in Canadian adolescent's literacy practices, attitudes and preferences, and that these differences are related to literacy achievement. Their study found support for the classroom interaction and identification with genre explanations for differential achievement by gender, and support for the division of labour explanation within the home. The study found strong evidence that reading enjoyment and confidence together explained substantial portions of the variance in test scores. The authors conclude by recommending that a constructivist approach to teaching reading which takes into account all of the models referred to here must be employed to address the needs of boys in today's classrooms. These findings corroborate the findings of Asher and Markell (1974, cited in Pritchard) regarding literacy test scores which found that boys read as well as girls when they were interested in the reading material. The conclusion being that boys' performance in reading seems to be facilitated by high interest material, while girls' comprehension appears to show little difference between high and low interest material.

Wilkinson's (1998) study of home and school factors which effectively moderated the gender achievement gap (in addition to gaps between students instructed in their home language and those instructed in an additional language) in New Zealand, found that the factors which moderate achievement

gaps relate to the classroom teacher's ability to handle diversity. "Well educated teachers who show commitment to their work and set up rich literacy environments for their students...and who frequently assess students' progress in order to address their needs, are doing a lot to close the gender...gaps among students. In contrast to what Division of Labour models might suggest about the negative impact of female teachers on young boys literacy learning, Wilkinson pointedly notes that the teachers noted as effectively moderating the gender achievement gap, were predominantly female. Moss (2000) found that best practice for raising boys' reading attainment gives children freedom to explore texts in different ways, for different purposes, along with highly structured opportunities to talk and write about their reading together. Within the home, however, it would appear that the division of labour theory does have merit. Studies are beginning to show the impact of significant male role model's attitudes toward reading as one of the most decisive factors in determining the attitudes of male children toward reading (Cartwright & Marshall, 2001; Tamis-LeMonda, 1999, cited in Sokal, 2002; Wells-Wilbon & Holland, 2001). As Gambell and Hunter (2000) note, girls' sharing of literature has a positive impact on their literacy achievement and thus, if fathers take a more active role in discussing literature with their sons, positive associations between male gender identity and literacy may be fostered.

Wadsworth, Knopik and DeFries' (2000) study supports the conclusions drawn by Gambell and Hunter as they sought to determine whether genetic differences could explain boys' relatively poor literacy standings in relation to girls and found no evidence to suggest this is the case. Sociocultural factors are more likely at work. Larger issues of classroom interactions, while potentially difficult to tackle, need to be addressed to support struggling readers and ensure the generalizability of gains made through reading interventions. More immediately, an intervention should take concrete steps toward addressing gender related concerns by demonstrating to struggling readers, regardless of gender, that we value their interests and tastes, for this has been widely demonstrated to have a positive effect on their attitudes to reading.

Of particular interest to this review as it pertains to the exploration of effective interventions for upper elementary struggling readers, a cohort statistically over-represented by males, is the question of addressing affective factors, which given the discussion above, are in all likelihood contributing to the difficulty of a large proportion of struggling readers: boys. McCormick (1999) points out, that the content of literature used in reading instruction tends to reflect interests which are more consistent with girls' culturally determined gender roles, rather than boys', and that this affects boys' motivation and achievement. Millard (1994, cited in Millard, 1997) similarly found that British elementary school classrooms tend to construct literary communities which are more relevant to girls than to boys: they tend to value the types of text girls prefer (narrative) and devalue that which boys tend to prefer (non-narrative). Trends over the last two decades to present content area text in narrative form have only exacerbated this difficulty (Millard, 1997). This should not be the case in an intervention program: the case is made here for determining the text type preferred by struggling readers and ensuring its inclusion in any program of intervention. This will mean that in all likelihood (given the predominance of boys in the cohort of struggling readers, and given the typical preferences of boys in general) that expository text in the form of popular literature will feature heavily in intervention programs for upper elementary students. By using texts which students value, the task of addressing the gaps in struggling readers' skills and strategies will meet with much less resistance and will begin to build positive associations with the act of reading.

Conclusion

What emerges from this review is the need to provide reading instruction to struggling readers in a manner which will accelerate their learning and bring them to the level at which they may successfully learn with their peers. It appears from the programs surveyed that this instruction is most efficacious in the one-to-one tutoring situation or a small group which allows for intense, explicit, scaffolded intervention. Late intervention must include an approach which will engage readers, not only through interesting materials, but through personal connectedness between student and teacher. Attention must be given to

text to ensure, that it is not only interesting, but that it is of high quality and provides opportunity for the student to use decoding skill, sight vocabulary, and skill in employing context-based cues. Text level must be monitored to ensure that it provides just enough challenge without frustration. Oral reading should be judiciously used, and rereading of text should be employed to ensure the student develops automaticity in word recognition and overall fluency. Where necessary, specific instruction in grapheme-phoneme relationships will be provided, and opportunities for exploring these relationships using contextualized writing should be included in each session. Students will be taught word-decoding skills as well as metacognitive strategies for comprehending text which will allow them to independently handle all text-types at increasing levels of difficulty. This explicit instruction in strategy use will also help to break the sense of personal inability so often present in the struggling reader as the student learns to successfully employ strategies for tackling difficult text. It follows from these requirements that those who teach such students must have a sound knowledge of the interaction between bottom-up or text-based and top-down or reader-based aspects of the reading process.

In seeking to point out that which is efficacious for late intervention programs, it must be noted that there is no one solution: each of the components mentioned above are integral and to focus on one to the exclusion of the others will not address the needs of struggling readers. For this reason, the components of effective late intervention programs have not been mentioned in hierarchical order. As much as we have come to see the efficacy of a balanced view of literacy instruction for regular classroom reading instruction, we must recognize the need for balanced instruction for struggling readers. Some may have specific gaps which are larger than others and may need to be addressed more intensively. Thus any effort to provide support to struggling readers must assess the individual strengths and needs of each student, and design instruction accordingly, though each of the components of successful late intervention programs will need to be addressed in some measure.

This review has not touched on the area of wider school reform which researchers such as Allington and Walmsley (1995) and Gaskins (1998) have noted as key to ensuring success for all readers.

Nonetheless, the need for collaboration between those who provide reading intervention and the classroom teacher is noted as fundamental.

A final note: much of the recent work which has been done in the area of late intervention appears to be of the case study variety. Further research which attempts to employ longitudinal methodology needs to be employed to establish the validity of the promising claims of late intervention models.

Chapter Three: DESIGN AND METHODOLOGY

Design

Sample:

A purposive sampling (Palys, 2003) method was employed for this study. Participants who met the following criteria were to be chosen for inclusion: *they would be upper elementary students; they would be experiencing reading difficulty which had not been identified in their early school years; and they would have no specific identified reading disability (i.e. stemming from phonological processing difficulty).* Finally, and following from the first three criteria, *the participants would be students who were struggling with the reading demands of the upper elementary school years where the challenges of employing reading for learning purposes increases.* These criteria are seen to be descriptive of many children whose performance "slumps" in their upper elementary school years and as such the sample may be seen as representative of a larger group. Two student participants were to be chosen for purposes of cross-case comparison. A local elementary school was to be contacted to locate students who fit the above criteria, and then parents of the students identified by the principal were to be contacted through a letter that detailed the study and provided informed consent were they interested in participating. If more than two candidates had indicated interest, inclusion would have been based on the family's willingness to ensure the participants' daily availability for the three to four month period. As it turned out, in the early planning stages of the study, two families living in the researcher's neighbourhood heard of the proposal and approached the researcher asking to have their sons participate. Both of the candidates met the criteria for the study in each of the four areas outlined above, and thus the purposive sample was formed.

Participants: The main participants in the study were two boys, both 11 years of age at the time the study was undertaken. Both attended the same neighbourhood public school and were in the sixth grade at the outset of the study, and the seventh when the study ended. Pseudonyms have been assigned to each. The first participant, Joel, was a friendly and outgoing boy, whose main interests revolved around sports

and friends. His early reading development was unremarkable in that he appeared to progress at the same rate as his peers. When he reached the fifth grade, however, Joel's teacher began to express concern that his reading was failing to meet provincial educational expectations; these concerns were echoed by his sixth grade teacher. Joel's parents were told that he was one of those students who fell between the cracks: not keeping up with his classmates, and yet not experiencing difficulty severe enough to warrant attention from the school's resource teachers. The second participant, Craig, shared many of the same interests as Joel, and likewise, was a boy with strong social skills, well-liked by teachers and peers. Craig had a family history of reading disability; however, testing in his Kindergarten year failed to find any specific reading disability. Craig experienced mild reading difficulty in his early years in school, followed by increasing difficulty with language arts and social studies with each passing year. His parents placed him in a private afterschool learning institute for a period of time in the fifth grade. His school work showed some improvement as a result of the study skills program, however, his parents discontinued the program the following year when they realized that reading ability, and not study skill, was the main source of Craig's difficulty. Detailed profiles for each boy follow in chapter four.

Setting: The study took place in an urban setting in western Canada, in a predominantly upper-middle class neighbourhood. Choice of venue was offered to participants and at their request the majority of the study was conducted in the researcher's home, with some of the parental interviews conducted in the participants' homes.

Method: A case study approach was used for this explanatory, capacity building study (Yin, 1994). As an explanatory case study it seeks to explain causal relationships between reading instruction and reading improvement. The dual-case approach provides the means for replication of specific outcomes and the ability to draw sound cross-case conclusions (Yin, 1994). Additionally, elements of action research were applied. Specifically this entailed:

1. An inherent capacity building approach.
2. Participant agency

- Participants were involved in the selection of reading materials used for the intervention
- Though the element of intervention was prominent, participants were also encouraged to set their own goals at the outset of the study. At the conclusion of the study, participants discussed whether or not they had attained their goals and set new goals for future reading progress beyond their participation in the study.

The research developed through a self-reflective spiral (Kemmis & McTaggart, 1992, cited in Cohen, Manion, & Morrison, 2000, p. 229).

- I.e. each assessment of reading skills and strategies made through pretests and ongoing running records, along with observations of shifts in attitude, were used throughout the data collection to inform the direction of the instruction provided.

Finally, the role of the researcher as observer in this study may be said to have been participatory within a structured and artificial setting (Cohen, 2000, p.186).

Implementation

The intervention aspect of the case study was carried out in an intensive manner: 30 minutes/day, 5 days per week, over 4-5 months (with approximately 6 weeks of holiday interspersed in the middle two months), for a total of 40 half-hour sessions with one participant and 50 half-hour sessions with the other. The first two sessions were used for pretesting and the last two sessions were used for posttesting. Participants were seen individually. Parents of participants were asked to dedicate 1 hour at the beginning of the study, and 1 hour at the end. Teachers were asked to dedicate 1 hour at the beginning of the study, though both declined to participate. The researcher personally conducted all of the data collection.

Data collection

The interviews, pretests and posttests, and some of the tutorial sessions were tape recorded, and later transcribed. Running records (see below) were made during some of the tutorial sessions.

Instruments

Instruments for the study were both quantitative and qualitative. The participants' reading progress was assessed through four types of instruments: face-to-face *interviews* and *informal reading tests*, both administered at the beginning and end of the study, in a pretest / posttest format; regular modified *miscue analysis* (Goodman, Watson, & Burke, 1987) to analyze the types of errors made by the participants and to measure fluency, use of prosodic features of text, and word recognition were used throughout the study; and finally, ongoing *observations* regarding strategy use, specific reading skills and comprehension, in addition to attitude toward reading were made during the tutorial sessions throughout the study. In this way, multiple sources of evidence were built into the study's design for data collection to increase construct validity (Yin, 1994). Further construct validity was ensured through member checking (Stake, 1995): to ensure the accurate reporting of the participants' viewpoints, each family was given a draft of the composite findings for review (also Yin, 1994).

Internal Validity was established through triangulation. Specifically this entailed *methodological triangulation* in the form of interview, informal reading inventory, and direct observation and *source triangulation* (Yin, 1994; Denzin 1970, cited in Cohen, 2000) using qualitative information gleaned from the participants themselves, observations made by the participants' parents, and the observations of the researcher (which are both qualitative and quantitative), to draw conclusions regarding the following three outcomes: reading skills, reading strategies and attitude toward reading. *Theoretical triangulation* (Denzin, 1970, cited in Cohen, 2000) is achieved through the blend of sociocultural and cognitive perspectives on reading acquisition which informed the study. Following is a description of the instruments employed:

Informal Interest Inventory: This is a set of open-ended questions, based on taxonomies developed by the FIRST Reading program (Newman & Metz, 1996) and The Reading Miscue Inventory (Goodman, Watson, & Burke, 1987) and is designed to determine the participant's attitudes toward reading,

experiences with reading, and areas of interest. It was administered with the purpose of understanding the student participant's perception of his/her reading ability and behaviour, to investigate how those perceptions have impacted the participant's success/failure with reading, and to facilitate the design of an appropriate reading intervention program. One of its most important and powerful aspects is found in the Reading Behaviours section, question 8, as it initiates the process of encouraging the student participant to set his/her own goals for reading improvement. The inventory is administered orally through an interview, and requires approximately forty-five minutes. It was administered twice during the study: at the beginning and at the end. The parents were given the questions in advance of the study before consenting to participate in accordance with the reflexivity of action research philosophy (Cohen, 2003). (Pre-Intervention Interview Questions: Appendix B; Post-Intervention Interview Questions: Appendix H)

Parental Interview: This is a set of open-ended questions, put together by the researcher, in which parents were asked to comment on their perception of their child's reading ability and behaviour, with the goal of documenting the child's reading history and enabling the researcher to better understand parental goals and aspirations for their child. Each interview required approximately half an hour and was administered twice during the study: at the beginning and at the end. It was orally administered. The parents were given the questions in advance of the study before consenting to participate in accordance with the reflexivity of action research philosophy (Cohen, 2003). (Pre-Intervention Interview Questions: Appendix C; Post-Intervention Interview Questions: Appendix G)

Classroom Teacher Interview: This set of open-ended questions, put together by the researcher, asks the child's classroom teacher to comment on his/her perception of the student's reading ability and behaviour, with the goal of further documenting the child's reading history and establishing a link between the reading tutor (researcher) and the classroom teacher. It was to be orally administered at the beginning of the study and would have required approximately half an hour to complete. The teachers of the selected student participants were given the questions in advance of the interview along with the invitation

to participate. Both teachers declined to participate. The teachers' participation was entirely voluntary and thus when both declined to participate, the student participants were not excluded.

Silvaroli's Classroom Reading Inventory: This is a version of an informal reading inventory which employs an individual diagnostic testing procedure to identify a student's reading skills or abilities or both (Silvaroli, 1997, p.1) The Classroom Reading Inventory employs two formats. The *Subskills format* diagnoses the student's contextual and non-contextual word recognition (based on the Fry Readability Formula, cited in Silvaroli, p.5) and reading comprehension. It allows teachers to pinpoint the student's reading level through the use of graded reading passages. It was used to determine the grade level at which the student participants were independently reading at the beginning and the end of the study. The second format, *Reader Response format*, uses a literacy emphasis to evaluate the student's ability to use inference and critical reading skills (based on Singer's SEER Technique, cited in Silvaroli, p.5).

The *Classroom Reading Inventory* contains pretests and posttests for both formats: the pretest was used at the beginning of the study for initial assessment; the posttest was used at the end of the study to determine progress made as a result of the intervention. The inventory required approximately half an hour to complete. (Note: while it would have been preferable to use a Canadian instrument, to the researcher's knowledge, no Canadian measure with acceptable reliability exists. Alberta Learning (1987) has put together a diagnostic package but the graded reading passages are poorly leveled and in the researcher's experience do not provide accurate results. Fortunately, most of the cultural references found in Silvaroli are pertinent to a student living in British Columbia.)

Clay's Letter Identification task: This is a list of the upper and lower case letters of the alphabet, in random order, used to determine the participant's familiarity with the letter names and sounds of the alphabet. It required approximately 5 minutes to complete, and was administered at the beginning and the end of the study. (Appendix D)

Knowledge of common consonant blends and digraphs and special vowel combinations: This listing of blends, digraphs and vowel combinations, created by the researcher based on recommendations

by McCormick (1999) assesses the participant's knowledge of letter combinations. It seeks to determine which combinations the student has not yet mastered and will need to be taught in subsequent instruction. It required approximately 5 minutes to complete and was administered at the beginning and the end of the study. (Appendix D)

Tests of phonemic awareness: This set of tests (Yopp, 1998, cited in Ericson & Juliebo, 2000) measures the participant's ability to hear rhyming pairs of words (phonological awareness), ability to break a word down to its component sounds, and ability to blend a word when given the component sounds (phonemic awareness). It was used to determine if there is an auditory processing disorder or weakness which may be causing reading delay/disability. (Appendix D)

Miscue Analysis with Running records: This observational method (Goodman, Watson & Burke, 1987) involves the use of running records in which the teacher (researcher) transcribes the student's reading and notes the miscues (more commonly thought of as mistakes), number of times a word/sentence is re-read, and the rate at which it is read. It was used to determine the appropriateness of text provided, to plan for the subsequent tutorials, and as a record of the student's progress.

The tutorial sessions

The original plan was to hold the half-hour tutorial sessions 5 days per week for approximately 12 weeks. By the time the study got underway we were three weeks away from the summer holidays. The participants and their parents were eager to begin the tutorials nonetheless, and so we had a 3 week block of tutorials, and then approximately 2 weeks during the summer, followed by a 7 week block for one participant and a 5 week block for the other. (This last block coincided with the beginning of the new school year.) In total, Joel received 40 half-hour tutorials, and Craig 50. Craig's number of sessions was longer due to the nature of his difficulty.

Each session was comprised of three main components:

1. Expository text reading : 10–15 minutes

2. Word analysis work (combined with phonological awareness work for Craig): 5–10 minutes
3. Narrative reading : 5-10 minutes

Iterative Modification of Research Design (Self-reflective spiral)

When the participants were first assessed, it was determined that they were both approximately two years delayed in their reading. Their results showed difficulty with comprehension, and I assumed we would be doing a lot of comprehension building work during the tutorial sessions. (An analysis of the test results follows in chapter four)

Early on in the tutorials it became evident that for both participants, reading fluency was a key issue affecting their comprehension and needed to be addressed in a systematic way. Research on fluency was then consulted, and a methodology formed which centres itself in an interactive model of reading (Rummelhart, 1994) applied through a constructivist approach to learning (Vygotsky, 1978 cited in McCormick, 1999) which would build on what the participants knew, and address their areas of weakness, while being mindful of their affective needs. The method developed is elaborated upon in chapter four, but for the purposes of this overview is outlined below:

1. Fluency reading using expository text:
 - Student reads the title and first paragraph, tries to predict the main idea of the expository passage.
 - Tutor reads the passage to student, demonstrating fluent reading.
 - Main idea, interesting facts and difficult words are discussed/analyzed.
 - Student articulates the reading strategies s/he is working on.
 - Student reads the passage to tutor.
 - Delayed feedback was employed to highlight strengths and problem areas with student's reading. This technique, as used by Clay (1985), has the tutor noting the reader's miscues as they occur but attempting not to interrupt the reading to correct them. At the conclusion of the

reading, the reader's attempts at self-correction are highlighted as strengths and significant word reading errors are discussed with the reader.

- Student rereads the problem sentences as they are discussed.
- Passage sent home and reads it to a parent.

2. Word analysis work

3. Student and tutor share the reading of a novel chosen by student using partner reading.

This method allowed for the incorporation of fluency training through modelling (listening-previewing) (Rasinski, 1990; Chard, Vaughn, & Tyler, 2002) and repeated-reading (Clay, 1985; Zutell & Rasinski, 1991; Allington, 2001; Samuels, 2002), with comprehension strategy work (Pearson, 1984; Alexander, Garner, Sperl, & Hare, 1998) and word level work (McCormick, 1999), while taking into consideration the affective needs of a reluctant reader (Worthy, Patterson, Salas, Prater, & Turner, 2002). It also allowed for the provision of manageable tasks which work within the reader's zone of proximal development (Vygotsky, 1978, cited in McCormick, 1999), allowing him to see real progress on a regular basis (Spiegel, 1995; Torgesen, 2001). Additionally, it allowed for the development of reading strategies which foster independence (Clay, 1985).

On a weekly basis the participants' progress with expository text was more formally noted and analyzed. The participants were given a photocopied reading passage of about 400 words. For the first half of the study they went through the passage highlighting the fullstops in red as reminders that these are stopping places; at approximately session 20 this highlighting of fullstops was stopped. They next predicted the main idea of the passage after reading the title and the first paragraph. They then read the whole passage while the researcher unobtrusively timed the reading (overt timing was noted early on in the study to cause the participants to read even more rapidly and increase the incidence of poor reading habits noted earlier) and kept a running record. The running record was later analyzed for the following information (based on observations of the participants' areas of difficulty) in an attempt to track and quantify the participant's progress:

Table 2
Sample of table used for tracking specific features of participants' reading

Date				
Word Count				
Time				
Words per minute				
% Miscues* (self-corrected and uncorrected)				
% Substitutions**				
% Nonsense Substitutions				
% Omissions				
# Additions				
% Ignored Full-stops				
# Added Full-stops				
Improvement with re-reading?				
Comprehension Accuracy				

* This category includes all miscues: substitutions, omissions, and additions, but does not include re-reading a word or phrase initially read correctly.

** This category does not include substitutions made for names.

Text selection

My three main concerns for text selection at the outset of the study were: text level, interest-level, and that the text was from the informational/expository genre. Provision of plenty of below frustration level reading and re-reading to establish word recognition is seen by many (Fleisher, Jenkins, & Pany, 1979; Clay, 1985; Adams, 1990; Samuels, 2002) as critically important for the development of a strong foundation in reading. As the study took the position that addressing the gaps experienced by delayed readers is a necessary component of effective late intervention programs, the principal of providing readers with Instructional and Independent level reading materials to read and re-read was key. And secondly, but of equal importance, text which was topically interesting to the participants was sought. The expository genre was the primary focus as this is the area that so many children struggle with in the upper elementary grades and beyond. While we also read narrative fiction in each tutorial session to provide balance, expository or content-area reading was the main focus of instruction.

To this end I first chose three selections from Billings (2001) "Wild Side" series, a series of high/low readings (high/low meaning high interest/lower reading level).⁴ *Close Calls* was chosen because it had the human element that I knew Joel to favour, *Extreme Sports* was chosen for both boys' interest in sports, and *Crime and Punishment* was chosen for Craig's interest in mysteries and criminal justice.

Both boys found the passages to be interesting. However, it soon became apparent that the passages were inappropriate for their presenting weakness: fluency. (This issue of text selection is also addressed in chapter four, but because it became a part of the iterative modification of the research design, an overview is provided at this juncture.) For Craig the passage length (approximately 1000 words each) was daunting, and I felt only reinforced his habit of attempting to race through the reading to simply get it finished. For both boys, the time it took to read left us no time for repeated reading of the passage during that tutorial session, and both boys reacted negatively to attempts to engage in a repeat reading on the following day. The passages did, however, help to clarify what had been noted about each boy's reading during the pretesting, and provided clear direction for applying a repeated reading for fluency development model combined with foundational strategy training to future tutorials. This period of using the longer texts lasted for approximately 15 – 20 sessions.

We then moved to using shorter expository passages chosen from the children's magazines: *National Geographic Kids* (formerly known as *National Geographic World*), and *Sports Illustrated for Kids*. The *Sports Illustrated for Kids* magazine was soon realized to be unsuitable, for although it was topically interesting to the boys, it had high frequencies of numerical descriptions and names, thus providing abundant opportunity for applying decoding skills but not enough opportunity for strengthening automatic word recognition skills and therefore fluency. Its structure was also such that impossibly long and difficult sentences filled with names and statistics did little to help either boy with phrasing and prosody, two key difficulties in their fluency development.

⁴ This particular series is labelled by the publisher as grade 4 to 6 level – this description of a somewhat wide range was somewhat inaccurate, the passages all seemed to read at about the late grade 5 level, though I did not apply any type of readability formula to them.

Thus, for approximately the last 25 sessions of the study, we worked with *National Geographic Kids* and a repeated reading model was employed. I was somewhat nervous about this approach, however, due to the fact that this magazine is aimed at 8 to 14 year olds. There could, therefore, potentially be several grade level variations between different articles. One of the aspects of successful fluency training shown to be important in the research is that care be taken to start fluency training at the reader's Independent reading level and then increase the difficulty in small increments as fluency improves (see Chard, et al., 2002). Finding enough engaging, appropriately levelled text to meet this finding was difficult, however. I therefore compensated in two ways: I pre-read the text before each tutorial session to be sure it was manageable for the participant, and when it looked like some of the words were problematic, some of the content unfamiliar or some of the sentences long and complex, I attempted to provide pre-reading scaffolding prepare the participants for difficult vocabulary. This seemed to be a positive strategy, and happily, as time progressed and the participants' reading improved, less and less scaffolding was required. The second compensation I made was to attempt to use a carefully graded reading passage (*Timed Readings: Book One*, Spargo, 1989) once per week for fluency training and conduct a miscue analysis on the participant's reading. This allowed me to check the participants' reading on a week by week basis in relation to the goals I had set out for them.

The second genre of regular connected text reading selected, narrative fiction, was chosen, as previously mentioned, to provide balance and attempt to foster an intrinsic sense of reading for pleasure, even though expository or content-area reading was the main focus of the study. For one of the participants, Craig, I felt it important to demonstrate for him in a small way that even though he prefers expository text, he could find enjoyment in narrative fiction as well. The decision also tied into the goal he set for himself at the outset of the study. This proved to be a good decision, as we did find books which were topically engaging for him and gave him opportunity to practice such aspects of narrative fiction as dialogue and first person narrative, two areas in which he demonstrated difficulty. By reading the novels using the partner reading approach, where we alternated reading one page aloud, Craig was able to

address his "fear" of long books. For the other participant, Joel, narrative fiction was a genre that he was just discovering as engaging and was a text type with which he was already beginning to experience success. I wanted to include it for him to balance the expository text reading which he often found difficult and with which he was not feeling successful at school.

A trip to the library yielded various titles I hoped would be of interest to the participants based on the information they gave me during their Informal Interest Inventory. I looked for stories with pre-teen boys as the protagonists that incorporated either sports, fantasy, mystery or tongue-in-cheek humour. Using these criteria, I found the following titles with reading levels I felt would be close to the participants' Independent Reading level:

The Time Warp Trio series by Jan Scieszca – fantasy
Enclopedia Brown series by Donald Sobol – mystery
Sixth Grade Secrets by Louis Sachar – favourite author of one participant
Wayside School Gets a Little Stranger by Louis Sachar – humour, favourite author
Herbie Jones and the Birthday Showdown by Suzy Kline - sports
Orp Goes to the Hoop by Suzie Kline – sports
Crash by Gerry Spinelli - sports
There's a Girl in my Hammerlock by Gerry Spinelli - sports
Grade Four Rats by Gerry Spinelli – boys' novel

Over the course of the tutorial sessions the boys chose from these selections. Reading of narrative text comprised between five and ten minutes of each half-hour tutorial session, or somewhere between a quarter and a third of our time each day.

Word Analysis

One of the areas of difficulty older delayed readers frequently display is difficulty with the morphology of words. Whether this stems from morphologically based difficulty (Mann, 1998), or a visual/perceptual difficulty (Willows, 1998) or is simply a part of the fact that poor readers need explicit instruction in all aspects of reading (Torgesen, 1998) and may not have received adequate instruction in word analysis, is not necessarily clear in the literature. What stems from each of these lines of thought, however, is the need to instruct students in word analysis for the purpose of more efficient decoding of unknown words and improved spelling (Adams, 1991). It is also an area that the majority of poor readers

need to address given their propensity for relying heavily on context cues for reading and not giving adequate attention to graphophonic cues (Gelzheiser & Wood, 1998).

Noting that this was a difficulty both Joel and Craig experienced, toward the end of the intervention we began working with words in structural analysis. Both boys were beginning to more consistently use syllabification independently for decoding unknown words, and so I wanted to build on this nascent skill. Learning syllabification rules is something that McCormick (1999) points out is difficult for students and most likely is not something students will apply beyond the worksheets or teacher directed exercises they are given. McCormick instead advocates that syllabification instruction be considered a portion of structural analysis teaching with "the purpose of showing students how words can be divided ... to demonstrate that a long and possibly intimidating word may be analyzed in terms of its smaller word parts and thus identified (p.335)." The emphasis in such an approach is on frequent spelling patterns, and thus builds on the Making Words (Cunningham & Cunningham, 1992; Rasinski, 1999) work we had been working on prior to the structural analysis word work.

We began with briefly looking at prefixes and suffixes and doing exercises to separate them from stem words. We then looked at long multisyllabic words dividing them for prefixes, stem, suffix(es). We did this briefly in the beginning in an isolated manner, using words I supplied and worksheets. We then began scanning for multisyllabic words as a part of pre-reading activity to reinforce the notion that this is a skill which will aid the boys in their reading.

Three main methods were used for helping the participants with decoding skills. These are shown below in the chronological order in which they were employed over the duration of the study:

Substitutions comparisons: Using delayed feedback, participants were shown on paper how a sample of their substitutions compared to the actual words printed in the text. More often than not this involved showing the participants that their responses had the same initial and final letters/sounds, but that the medial sounds/letters were different.

Syllabification: Prior to reading the expository text (for 3 sessions) complex words and unfamiliar names were pulled from the text and participants were guided in finding the syllables and reading the words and names syllabically. The first time this was done, the researcher previewed the text and wrote out the words/names. The second and third time, the participants skimmed the text, wrote out the words, and were guided with the syllabification. This was carried out in sessions 5-10.

Making Words: Timothy Rasinski's version (Rasinski, 1999) of Cunningham and Cunningham's (1992) Making Words was used. In this exercise, students are given a selected set of letters (which are the letters required for the final word which is made). Students are then guided through spelling a series of progressively longer and more difficult words (14 in total) by using clues such as number of letters, rhymes, definitions. It was aimed at addressing underlying phonological processing difficulties of one of the participants, giving both participants experience working with some of the letter/sound relationships with which they had difficulty, and helping them to use rime and analogy as spelling aides. Often these words would be sorted on a subsequent day by patterns such as first letter similarities, words containing specific short and long vowels, words with specific rhyming patterns. This activity was employed approximately 8 times with the participants during sessions 20 to 30. (See Appendix E)

Pre-fix and Suffix work: We began with briefly looking at prefixes and suffixes and doing exercises to separate them from stem words. The multisyllabic words were presented aurally to the participants first, and they were to orally name the root word. We then looked at the words dividing them for prefixes, stem, suffix(es). We did this for approximately four sessions in an isolated manner, using words I supplied and worksheets (words selected from McCormick's list of most commonly occurring prefixes and suffixes (McCormick, p. 329-331) See Appendix F). We then began scanning for multisyllabic words as a part of pre-reading activity to reinforce the notion that this is a skill which will aid the participants in their reading. This work took place in the last few sessions with each participant.

Phonological Awareness

Phonological and phonemic awareness training were incorporated into several aspects of the intervention. Explicitly, phonemic awareness was addressed through the Making Words activity. Phonological awareness was implicitly addressed through: the oral reading of text; strategy training for self-monitoring of the oral reading; the method of delayed feedback which had participants listening to the tutor reading the sentence in which their miscue occurred with the miscue included, and aurally as well as visually attempting to identify the problem (based on Clay's (1985) method for providing corrective feedback); and finally, through the tutor orally presenting the words used in the prefix/suffix activity before the participants viewed them, and having the participants separate the root word orally before visually addressing the task.

Data Analysis

Analysis of the data falls into three categories: Pre-Intervention, During Intervention, and Post-Intervention

Pre-Intervention: Synthesis of data drawn from the Parental Interview and the Informal Interest Inventory provided a background profile for each of the participants. Pretest data from: Silvaroli's Informal Reading Inventory, Clay's Letter Recognition task; Recognition of Common Consonant Clusters and Digraphs and Vowel Combinations; and The Yopp-Singer Test of Phonemic Awareness, were then examined to determine reading level and specific areas of weakness. The synthesis of these pre-intervention qualitative perceptions and quantitative scores became the starting place for the intervention which comprised the bulk of the study.

During Intervention: Running records which were taken at regular intervals were analyzed for specific skills and strategies. Field notes were kept throughout the intervention and later analyzed for patterns and trends

Post-Intervention: The Parental Interview, post-intervention version and the Informal Interest Inventory, post-intervention version, were analyzed to determine how the participants and their parents perceived the

progress they had made during the intervention. This was then compared to the posttest data obtained from Silvaroli's Informal Reading Inventory, Clay's Letter Recognition task; Recognition of Common Consonant Clusters and Digraphs and Vowel Combinations; and The Yopp-Singer Test of Phonemic Awareness. The synthesis of these post-intervention qualitative perceptions and quantitative scores were then used to judge the effectiveness of the procedures used in the intervention.

Pattern matching (Yin, 1994) was also used in the analysis of the findings. This examination of the findings in light of current theoretical assumptions regarding reading difficulty from the extant literature is seen as strengthening the internal validity of the study.

Chapter Four: RESULTS AND DISCUSSION

Data in this chapter is divided into three sections. The first two sections contain the separate data for the two cases, ordered chronologically: results of the initial assessment; planned intervention strategy based on the initial assessment; the tutorial sessions; and results of the final assessment. Each of these sections contains a discussion of the combined results to provide an overall picture of the participants as readers. Finally, depictions showing the relationship between method and outcomes summarize these sections. The third section provides a cross-case discussion of the results from the two case studies.

Joel's Case

Results of Initial Assessment

Informal Reading Inventory and Parental Interview: (See Appendices B and C for these instruments)

Joel's Profile

Joel was an 11 year old male who was in his last month of the sixth grade at the beginning of the study. Joel lived with both of his parents and a younger brother. Joel's main interests centred on sports. He played in basketball and hockey leagues, enjoyed track and field at school, and spent much of his free time outdoors playing ball hockey, skateboarding, roller-blading, and biking with his friends. Joel enjoyed animals: the family had a pet German shepherd and at one time had a hamster; monkeys, penguins and snakes were favourites because they were "cool." Joel's television interests leaned toward adult drama and comedy. He listed his favourite shows as: *The Simpsons*; *Law and Order*; *Friends*; and *Will and Grace*. Joel's father coached his basketball and soccer teams and Joel enjoyed going for walks, playing tennis, and going to movies with his mother. At the beginning of the study they had made it a goal to see a play together at least once per year. Joel's mother reported that he willingly helped with household chores.

When asked to describe her child's personality, Joel's mother characterized him as having a reasonable self-concept and as being a kind and fair child.

Impact of Parents' Education

Joel's father was university educated and held a Bachelor of Science degree. His mother was college educated with a diploma in Early Childhood Education. Joel's mother felt that his father's level of education had positively impacted Joel as he saw that having a university degree opened vocational doors which might not otherwise have been a possibility. She worried that her level of education may, on the other hand, negatively impact Joel as she had been highly successful in her business endeavours (unrelated to her college diploma) and feared he might receive the message that a university education is therefore not necessary. This was a concern for the family, as both parents would like to see Joel complete university. His mother often wondered how much farther she could have gone vocationally had she attended university. Additionally, Joel's father's family background was one where education is highly valued, making university a necessary goal in Joel's father's mind. Joel himself stated, "I think I might go [to university,] I want to be an orthodontist." Joel was positively impacted by his parents' vocations. His mother reported that he was impressed with his father's work and occasionally said he would like to become a biologist too. She also felt that through her work in retail sales, Joel saw that hard work and an outgoing personality can bring success.

Experience with Reading

Joel's mother reported reading daily to Joel from an early age. She remembered that he enjoyed wordless picture books as a toddler. Joel requested and enjoyed hearing favourite stories over and over again throughout his preschool years. At the outset of the study, Joel's parents sporadically read aloud with him, but Joel mostly read to himself. When asked if he enjoyed being read to, Joel replied, "I like Harry Potter," possibly remembering the last book he enjoyed hearing read aloud. When asked about other types of read-alouds that he enjoyed, Joel stated, "I like adventure stories: dungeon and dragon kind of stuff; fantasy."

Reading material in Joel's home was mostly comprised of narrative fiction. His mother reported that both she and Joel's father enjoyed reading, but generally only found time for it when on vacation and in his father's case, when away on business trips. She said that Joel really only read at home when he was compelled to do so, and felt that his attitude toward reading is that it is important but not necessarily enjoyable. Both boys in the family were asked to spend 10 minutes per day reading to themselves. Interestingly, Joel reported that he "ha[d] to do [his] reading for an hour every night."

When asked about types of books Joel chose to read, his mother reported that he enjoyed narrative fiction, and did not freely choose to read content area or factual books. She also said that he had recently discovered the works of Judy Blume and she saw him choosing to read a little more often when he had her books. Joel confirmed this: "I have a book I'm really into right now. (Joel eagerly went to get the book from his back pack and brought it to the table as he said this.) It's called Double Fudge. I've read almost all of them. It's the humour that makes them interesting. There's one kid who says really funny stuff like, 'B-e-e-r spells whiskey!' (Joel sings the quote)."

Joel's mother did not recall that learning to read was remarkable in any way for Joel. Joel did, however, remember that he learned to read in the first grade and recalls some of the specific methods his teacher used: "I think there was an alphabet around our class and we would practice on A. We would go, 'ah, ah.' Then she would make us do the same thing over and over. Then we would go to /i-s/ and start learning /h-i-s/." In both the fifth and sixth grades, however, Joel's teachers reported to his parents that his reading was below provincial standards for his grade level. Additionally, at that point his parents felt that Joel had to yet to read a book he "couldn't put down," i.e., he had never shown signs of being passionate about what he was reading. The teacher's assessment was that he was a child who fell into an educational grey area: not meeting grade level expectations in reading and reading based subjects, yet not struggling enough to qualify for remedial teaching from the school's Resource department. This was a source of frustration for Joel's parents who felt that he was being bypassed by the educational system.

Unfortunately, though invited to contribute, Joel's sixth grade teacher did not respond to the written request to participate in the study, and thus her insights into his abilities and areas of difficulty were not available. Joel reported that he liked school and that Math was his favourite subject. He stated, "I think it's fun. Solving problems is cool." He reported that he did not enjoy Social Studies "because the teacher doesn't word things properly. I just don't understand it." Joel stated that in general he liked to read, "but at school it's different." His sixth grade teacher had a daily period of one hour where the students are required to read silently to themselves. Joel's mother reported that this was an unmonitored activity, and at one point she became concerned when she discovered Joel had been reading the same book for three months. Joel felt that the books available to him in class for this reading period were often uninteresting and made the following insightful observation which could explain the length of time it was taking him to complete a book during classroom silent reading: "[W]hen I don't like the book I start dozing off. I'm reading the words but I'm not making any sense of it because I start thinking about something else. If I'm not interested I have to go read that paragraph again." Fortunately, his recent interest in Judy Blume novels seemed to turn things around, and at the beginning of the study he was taking his own books into class for the daily reading hour. According to Joel's mother he had always shown a strong preference for narrative text, and rarely read expository text of his own volition.

Regarding reading aloud for his parents, Joel reported: "I really don't do it that much. Sometimes I read aloud for my teacher. It's okay. I'm a lot slower reading aloud. When I read aloud it's better if I like the book." Joel started out with a non-committal response when asked about reading aloud in front of the class: "I really don't mind it," and went on to say, "but I really don't like it ... because I'm not really fast at reading aloud. Everybody will be finished by the time I'm three-quarters through."

Experiences with Listening, Speaking and Writing

English was Joel's first language and there were no other languages spoken in the home. His early language development appeared to have been routine. He enjoyed having conversations with his friends and often talked on the phone or chatted with them on MSN. He also reported that he finds

listening to others speak to be interesting. When speaking with adults he is polite, articulate and appears to be at ease.

Joel reported that he enjoyed writing stories: "I don't know if I'm good at it, but it feels good. I like writing stories for my teacher and right now we have groups and we are all writing a newspaper.... I don't really like writing like reading response. It's usually stuff I don't like reading and the teacher says, 'Here read this,' and it could be three or four pages long and I start zoning out. I'm actually reading the words like, 'This is a' But I wouldn't know what I read. When I go to answer the questions they don't make sense."

Concept of Self as a Reader

Joel's first reply, when asked who he knew that was a good reader, was his dad: "He reads fast and clearly." Second on his list of good readers is "[a] guy named William. He can read like my dad." He described a poor reader in the following manner, "Some people read out loud and they slur it, kind of." Issues of speed and clarity were important for Joel. He stated that he feels he is an "okay" reader, but "compared to most people in my class I don't think I'm a very good reader. Like for reader response, I'll be three-quarters done reading and they will have already answered the questions." His main reading goals for himself were to "learn how to read faster and smoother."

Use of Reading Strategies

Joel was able to articulate three main strategies he employed for decoding unknown words: asking for help; sounding it out; and using the context through reading on and then re-reading. In his words: "I ask somebody who is reading beside me or I ask the teacher or I ask my dad." Secondly, he states: "If no one is there, I sound it out and try to make sense of it." And thirdly: "I would say what I think it is and then read on for, like, two sentences and then try to figure it out." Joel felt that this third strategy is one which good readers employ and stated that he once shared this third strategy with a friend who was struggling "and it helped him."

Silvaroli's Informal Reading Inventory, Pretest: Joel's initial reading assessment found him reading independently between the fourth and fifth grade level for non-contextual and contextual word identification, with word identification in the graded word lists (non-contextual) notably breaking down at the fourth grade level, in accuracy as well as fluency. His comprehension scored at the fourth/fifth grade level for both factual and inferential comprehension in the Subskills and Reader Response formats. Joel employed re-reading to attempt to self-correct almost all of his miscues in contextual reading: he appeared to be cued mostly by his utterances not making sense, and occasionally when the utterance he produced did not bear enough similarity to the letters printed. Interestingly, Joel did not apply this same sense-making check on non-contextual words, for example substituting */letoose/* for lettuce and */sherill/* for shrill. Also, Joel had a strong tendency to read right through fullstops, but did frequently self-correct when he does so. This behaviour was more evident in expository text than it was in narrative text. When he came upon unfamiliar words, Joel attempted to "sound it out," but did not use accurate or efficient decoding methods. In particular, he focused on the initial letters of the unfamiliar word to make his guess and when he did try to read the whole word, mixed the order of letters within a word, or omitted key letters, and did not use "chunking" of letters to decode syllabically.

Clay's Letter Identification task: (See Appendix D) Joel had no difficulty with any of the letter names or sounds of the alphabet in either the upper case or the lower case form. Incomplete knowledge of individual letters and sounds did not appear to be an area of concern.

Knowledge of common consonant clusters and digraphs and special vowel combinations: (See Appendix D) Here Joel experienced difficulty. While able to read the vowel combinations (which were provided simultaneously in an isolated form and a contextualized form) without error, his accuracy rate of 66% on the common consonant clusters shows this as an area of weakness. The consonant digraphs

were all known by Joel (/ch/ /sh/ /th/ /wh/ /ph/). However, he did not read the following clusters in their blended form: /spl/ /cl/ /gl/ /spr/ /cr/ /tw/ or more simply those involving /-l/ /-r/ and /-w/.

Yopp-Singer test of phonemic awareness: (See Appendix D) Joel's accuracy was 100% with the basic test of phonological awareness: rhyming; and the two basic tasks of phonemic awareness: blending, and segmenting. At this basic level, it appeared that Joel did not present with any underlying phonological processing difficulties or phonological core deficit which might have been the basis of his reading difficulty.

Table 3
Joel's Pretest Summary

	Pretest
Phonological and phonemic Awareness	
Rhyme Detection	100%
Blending	100%
Segmenting	100%
Letter Identification	
Names	100%
Sounds	100%
Common Vowel Combinations	100%
Consonant Cluster and Digraphs	66%
	<i>/-l/ /-r/ and /-w/ clusters problematic</i>
Independent Reading Level	
Word Recognition (non-contextual)	Grade 4-5
Word Recognition (contextual)	Grade 5
Comprehension	Grade 4-5
Reading Speed (at Independent reading level)	116wpm

Some of the errors Joel made during his reading were of interest as I wondered if they might hold insights into his reading difficulty beyond that which my initial assessment instruments measured. Using the original running record and the tape recording of Joel's reading from Silvaroli's Informal Reading Inventory, I made a closer analysis of his reading looking beyond his word recognition and decoding skills to some of the finer mechanics of reading. Of particular interest to me were: the sense I had during the assessment that punctuation was being disregarded as Joel attempted to read quickly (reminiscent of his conception of a good reader being one who reads fast) and full attention to the text was not being given. I

noted his reading speed and the percentage of miscues Joel made in order to establish a baseline to monitor his fluency for the rest of the study. My premise in all of this was that in addition to poor sight vocabulary and inefficient decoding skills, Joel's lack of careful reading may have been at the base of any comprehension difficulty he was experiencing, so that when the specific issues of adding and omitting words, adding and omitting fullstops, in addition to improved decoding skills and increased sight vocabulary, were addressed in the tutorials, his overall word recognition and comprehension would improve. Additionally, I was somewhat concerned with his acceptance of some nonsense substitutions at his Independent reading level and wanted to see if that would improve following reading strategy instruction. A summary of the specific elements I decided to track follows:

Table 4
Pretest Tracking of Joel's Reading Skills

	Pretest: Grade 5 Level (Independent)	Pretest: Grade 6 Level (Instructional)
Word Count	116	174*
Time	1.0 minutes	1.4 minutes*
Words per minute	116wpm	109wpm*
% Miscues* (self-corrected and uncorrected)	11.2%	14.9%
% Substitutions	2.6%	1.7%
% Nonsense Substitutions	66%	33%
% Omitted Words	4.3%	9.8%*
# Additional Words	2	3
% Ignored Full-stops	22%	18.2%**
# Added Full-stops	0	1
Comprehension Accuracy	100%	70%

*Joel skipped a section containing 21 words which is reflected in his speed:
153 words / 1.4 minutes = 109 words per minute.

**This figure does not include the fullstop omitted by the 21 word section which was skipped.

Planned Intervention Strategy Based on Initial Assessment

For purposes of instruction and evaluation, the data on Joel's reading is addressed from this point forward in three broad categories: reading skills, reading strategies and attitudes toward reading, as these seemed to be the main themes which presented from the data for both participants.

Reading Skills:

From this initial assessment, it appeared that comprehension was not the primary area of difficulty for Joel: he appeared to be thoughtfully processing a good portion of what he read and retaining the information, albeit at a grade level two grades below his peers. His areas of weakness seemed to reside in poor automatic word identification, inefficient decoding of unknown words (caused in part by lack of familiarity with common letter patterns or associations from which syllables are formed), and inattention to the details of text. He routinely read words incorrectly and then re-read the phrase, sentence or paragraph, occasionally several times, to clarify. While this attention to making sense and willingness to self-correct were both commendable, and signified that he was using a self-monitoring strategy, their over-use seriously impaired Joel's fluency, in spite of the fact that he appeared to be trying to read quickly. Finally, his inattention to punctuation frequently caused him difficulty as sentences run together failed to make sense, again resulting in re-reading behaviour which interrupted fluency, comprehension and ultimately enjoyment of text.

Thus a major goal for Joel was to build his fluency so that he was not reading and re-reading passages over and over again. Joel's poor word recognition or instantaneous recall of common words would be addressed through the increased amount of daily reading Joel participated in through the daily tutoring sessions. To address his inefficient word attack skills, he would be led to utilize syllabification, onset and rime, analogy, and identification of root words for decoding unfamiliar words within the context of the passages being read.

Reading Strategies:

Joel initially stated, and to some degree utilized, three strategies he used for decoding unknown words (sounding it out; reading on to establish context, then re-reading; and asking for help). Unfortunately, due to ineffective decoding skills and poor attention to punctuation, these were of little help to him. Thus, expanding Joel's independent use of decoding skills/strategies was in order. I also wanted Joel to build on Joel's self-monitoring strategy by helping him actively take control of his speed of reading through deliberately slowing himself down and establish in his mind that his reading must always make sense, so that he would not allow himself to accept nonsense substitutions for words he did not know. To help him do so, a knowledge activation strategy was introduced. Specifically, I planned to have him employ prediction prior to reading and evaluating that prediction at the conclusion of the passage. Summarization strategies were to be introduced through stating the main idea of the passage after reading. Finally, I wanted him to reflect on his reading as the tutorial sessions moved along and develop his own personal list of strategies for aiding his reading.

Attitude toward Reading:

Other than having a sense of inadequacy regarding his oral and silent reading ability with expository text, it appeared that Joel had not built an emotional resistance to reading; though his self-identified "zoning out" during reader response (expository text) exercises at school indicated limited engagement with this type of text. His recent interest in the Judy Blume novels seemed to indicate that he was on the cusp of becoming an engaged and self-motivated reader, at least in the narrative genre. Attention given to some of the early skills and strategies of reading to help the entire process of both narrative and expository text reading become less labourious for Joel was expected to provide the final step in his move toward becoming a self-extending reader.

Joel's confidence in himself as a reader was thus expected to show good progress as he experienced a strengthening in fluency and decoding skills through the daily reading experiences provided

in the tutorial sessions. By using expository text which was appealing to Joel, it was expected that engagement would be increased and thus motivation in the area of expository text reading improved.

Stated formally, goals and objectives for Joel were as follows:

Figure 1
Intervention Goals for Joel

<u>Goals for Joel</u>	
Goal 1: Joel will read with greater fluency.	
Objectives:	
1. Joel will read extensive amounts of connected text over the course of the intervention	
2. Joel will read aloud during daily tutorial sessions	
3. Joel will be encouraged to actively stop for fullstops and new paragraphs, and pause for commas.	
4. Joel will frequently engage in repeated reading of text	
Goal 2: Joel's sight vocabulary will be expanded.	
Objectives:	
1. Joel will read daily.	
2. When on holiday Joel will be encouraged to read daily	
3. If increased whole text reading does not improve Joel's sight vocabulary, isolated word recognition activities may be added	
Goal 3: Joel's decoding skills will be expanded	
Objectives:	
1. Joel will be encouraged to continue using his knowledge of context for aiding word identification	
2. Joel will look for blends, digraphs, and rimes in words and names	
3. Joel will use analogy to decode unfamiliar words, particularly names where context does not help with decoding	
4. Joel will look for root words in words with morphological "additions"	
Goal 4: Joel's comprehension of expository text will be strengthened	
Objectives:	
1. Joel will predict the passage's main idea using the title, picture (if present) and first paragraph before reading the full passage.	
2. Joel will discuss the content of what he has read at the end of each passage	
Goal 4: Joel will experience greater success with expository reading	
Objectives:	
1. Approximately one-third of tutorial instructional time will be given to expository reading	
2. High interest expository text will be utilized	
3. Joel will develop strategies for dealing with expository text	
Goal 5: Joel will begin to employ foundational metacognitive strategies in his reading	
Objectives:	
1. Joel will actively slow his reading down	
2. Joel will ask himself, "Does this make sense?" as he reads	
3. Joel will develop a personal list of metacognitive strategies to aid his reading	
4. Joel will frequently articulate "his" reading strategies prior to reading	

The Tutorial Sessions

As we moved into the tutorial sessions, observations made during the initial analysis proved for the most part to be accurate (though perhaps not as profound as they might have been), and thus the goals set for Joel continued to be appropriate. If it could be said that there was one main goal for Joel, it was to help him become successful with a range of text, with the main objective being to supply him with the necessary skills and strategies to make that success possible. Given that much of this would involve fluency work, the goal he set for the tutorial sessions was particularly appropriate, for he had clearly and without hesitation stated that what he had hoped to take away from the tutorials was the ability he to read "faster and smoother."

We began the tutorial sessions using the *Wild Side*, high interest/low reading level texts described in the methodology. I had particularly chosen one of the three readers, *Close Calls*, (*Billings & Bilings, 2001*) because it had the human element that Joel enjoyed in narrative text, and thought it would provide a good bridge from narrative text reading to expository text reading. I had also chosen, *Extreme Sports* (*Billings & Bilings, 2001*) with Joel's love of sports in mind. Joel did indeed choose *Close Calls* as the first reader that he would work with. A word regarding these readers is in order at this time. When planning this study, I was uncertain as to how I would find the amount of properly leveled text for the participants. After searching the library and various publishers' catalogues, I thought that these readers would be a good starting place as they provided controlled reading with topics of interest to pre-teen boys. However, concern for tight control of text level was soon discovered to be of less importance than other factors. While Joel enjoyed the topics of these readers, it became apparent that the length of the passages was more suited to advanced comprehension development and not the more basic issues of word recognition and prosody which appeared to be Joel's comprehension impediment. Additionally, these readers simply were too similar to the reader response work he disliked at school. After approximately 15 sessions with these readings, we moved into using expository text passages found in children's popular culture. In

particular, National Geographic Kids provided a rich source of expository reading whose gloss and variety Joel found more inviting. (See Chapter 2: Text selection, for an elaboration on this note.)

Reading Skills:

As outlined in Chapter Three under Iterative Modification of Research Design, Joel's need to build fluency (speed and accuracy) was addressed through repeated reading of expository text. As we moved through the tutorial sessions it became apparent that Joel's automaticity with sight vocabulary was building through the daily exposure to text the half-hour tutorial sessions provided, and no additional isolated word recognition tasks were necessary. It also became increasingly apparent that Joel struggled with decoding skills. An example of this, from our seventh tutorial, is seen in his attempt at the surname *Utley*. The name appeared four times, and he made the following substitutions.

Instance one: *Ulley*

Instance two: *Ulley*

Instance three: *Ulley*, self-corrected to *Utley*

Instance four: *Utley*

Joel seemed to realize he was not correctly reading the word after three instances, but his attempt at self-correction resulted in a correct reading followed by his scrambling the internal letters in the fourth instance. Two mini lessons on syllabification were all that were required, however, for this to become a skill which Joel went on to consistently and with rapidly growing accuracy, apply to his reading. For example, some of the substitutions he made early in the tutorial sessions, show his scrambling of letters, inattention to consonant blends in the initial position, inattention to internal features of words, and mismatch between word lengths:

Text:	damage	shifted	tried	follow	plane	house
Substitution:	<i>daughter</i>	<i>sniffed</i>	<i>tired</i>	<i>flow</i>	<i>plan</i>	<i>horse</i>

Midway through the intervention, he displayed these substitutions:

Text:	chick	Emperor	internal
Substitution:	<i>chicken</i>	<i>Empire</i>	<i>international</i>

And finally, at the end the intervention:

Text:	Whitman	maintains
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Substitution: Whiteman mountains

In this final case, we can see that his substitutions now use a consonant framework which is consistent with the word as it appears in the text, the substitutions are much closer in word length than his earlier substitutions, though his substitution of *mountains* for *maintains* was semi-nonsense in the context in which he read it. (He explained that he thought it was a way of saying something akin to “accumulates,” which within the context of the passage would have made sense.) By the time of this third sample, he had also had approximately 9 5-minute word-making sessions (Appendix E), and was approximately three-quarters of the way through the tutorial sessions. Where these small doses of decoding skill instruction make their greatest contribution is in his articulation of these skills as strategies (see below) and the types of words he was able to tackle. For example: in the same passage cited as the final example above he hesitated with the following words, *stiffly*, *resident*, and *visibility*, indicating they were not automatically familiar to him, and then went on to read them accurately and swiftly; whereas at the beginning of the study, unknown words were often attempted several times over with inaccurate ordering of the sounds and omissions of letters.

An excerpt from my field notes highlights the effectiveness of the small doses of decoding instruction:

Field notes for September 11:

- I was pleased today to see that Joel was consistently using syllables to decode unknown words.
- When we first started he regularly attempted to decode letter by letter or by using groups of letters which seemed to defy natural syllable boundaries
- We haven't spoken overtly about syllables since June (as far as I can remember) so this is an especially amazing thing 😊

Incorrect use of the prosodic features of the text was Joel's second major impediment to accurate reading. My notes from early in the intervention reveal this:

Field notes for June 26:

- [Joel] has a definite tendency to race through full-stops, and though he goes back to self-correct these omissions, it takes away tremendously from his fluency when he re-reads a sentence or passage over and over.

In the beginning I had been timing Joel's reading to track changes in his reading speed. But I soon realized that this was actually contributing to his habit of reading through the punctuation. I stopped timing him daily, and moved to timing him inconspicuously about once a week. I had hoped that this and regular time spent reading would help him get past the inattention to prosodic features, but it did not. After approximately 10 sessions, I began giving him photocopied passages once per week, and for five weeks had him highlight the fullstops in red before reading. This explicit action on his part soon yielded good results, so that when we abandoned the highlighting, by about the 20th session, he was almost uniformly able to read through a complete passage without having to re-read to correct for the punctuation omissions which inevitably resulted in nonsensical reading. It was also at this point that I began regularly having him articulate the strategies he could use to improve his reading, and stopping for all fullstops was one skill that we voiced as a strategy. (See below.) It does seem evident that the physical act of identifying the punctuation combined with the metacognitive aspect of reminding himself to use the punctuation prior to reading, helped to turn this habit around.

Reading Strategies:

From the beginning, I knew it was important for Joel to begin seeing that there were concrete steps he could take to help his reading. I started off with reminding him to be sure to listen to himself as he read to be sure to be making sense, and to be sure to stop for all fullstops. Additionally, from the beginning I engaged him in a pre-reading activity of using the title, sub-title (if present), and picture/photo (if present), and the first paragraph to predict what the passage might contain, establish context, and activate prior knowledge. These three reminders/activities, first initiated by me, were to form the nucleus of Joel's comprehension strategy instruction. After approximately 8 sessions, I began to ask Joel to tell me what he could do to help his reading, prior to reading, helping him to remember the three strategies I had at first articulated for him. This was the extent of my overt teaching of strategies.

The oral reading employed throughout the intervention was initially seen as necessary for simply allowing me to monitor Joel's reading. However, I soon came to see its utility in helping Joel learn to apply

self-monitoring strategies, especially with regard to his habit of ignoring fullstops in expository text. It is as though the act of reading aloud let him stand back from his reading and evaluate it from a distance. Gaining this type of conscious control over his reading was an important step for Joel.

Thereafter, as I began working on some of the reading skills in which Joel had displayed weakness, he began to articulate some of the skills instruction as strategy reminders for himself. Thus his list of articulated strategies grew to include:

1. Predict what the passage is going to be about by using the title, pictures (if there are any), and the first paragraph.
2. Listen to myself to be sure I'm making sense.
3. Stop for all periods.
4. Read the sentence again if it doesn't make sense.
5. Read at a good pace – not too fast.
6. Use the syllables to figure out long words.
7. Look for two different words in one word.
8. Use the word parts

While not wanting this to become a tedious exercise for Joel, I did nonetheless follow the research (Dole et al. 1996; Butler, 1998b) which states that students are more likely to employ reading strategies which they themselves have articulated prior to reading. Wanting to set the stage for increased strategy use beyond the tutorial setting, I typed up Joel's strategies as he articulated them (1- 6 above, 7-8 were not articulated by Joel until the posttest) in large font and placed each strategy on a separate index card. These were used as a novel way of reviewing his strategies, and to increase the likelihood of his remembering them for the future by working with both the auditory and the visual modalities. Toward the end of the study, these cards were sent home with Joel, so that his parents would be aware of the skills and strategies we had worked on in the tutorials, in order to enable them to carry on with this way of approaching expository reading at home.

Attitude toward Reading:

Much of the consideration given toward attitudinal factors is discussed in Chapter Three under Text considerations. Remembering that Joel's attitude toward narrative text was positive and that he was showing signs of becoming intrinsically motivated to read narrative text for pleasure, I wanted simply to

support him in this area. Throughout the study, when given choices of text geared to his reading level and interests, Joel was highly motivated to read narrative text, even wanting to take it home to read while away on holiday. Providing text which was interesting to Joel in the expository genre was seen as highly important in improving his attitude toward this type of reading. The text we used early in the tutorials, I soon came to realize, resembled the reader response type of reading he did at school, for which he had expressed dislike. After a few sessions I could see that it was becoming more difficult for him to make a choice of what to read from the three texts I had to offer. Once we switched to the National Geographic for Kids magazines, engagement with the text improved.

Results of Final Assessment

Informal Interest Inventory: Post-Intervention and Parental Interview: Post-Intervention:

(See Appendices G and H for these instruments)

Attitude toward Reading:

Joel stated that he “kind of like[s] to read” now; “a little more than I used to,” when asked how he feels about reading. In contrast to Joel’s assessment of his reading enjoyment, his mother reported that he actually appeared to be enjoying reading now. She stated: “Before [the study] he would read because it was required: he would read a chapter as quickly as possible just to get it over with. Now he is beginning to voluntarily read more than one chapter when he reads at night and seems to be getting into the story.” While Joel may still not feel that reading is at the top of his list of favourite activities, this new behaviour did demonstrate that he was voluntarily choosing to read narrative text in his free time. Another interesting attitudinal contrast arose regarding the repeated reading method we employed for the majority of the tutorial sessions. When asked what he did not particularly enjoy about the tutorial sessions, he stated that “it got a little boring” when he had to read the magazine articles at home for his parents. While on the other hand, his mother stated that he was the one who daily took the initiative to get her to sit down and listen to him read, saying, “Mom, I need to read to you.” While doing the reading and subsequently

discussing the interesting parts of the articles, she felt that he was engaged in the reading and interested in the subject matter. Joel's mother offered the interpretation for this apparent contradiction as arising from the tension he may have felt regarding his responsibility for doing the repeated reading, and the difficulty she had finding the time to sit with him. Joel's mother also reports that prior to the study Joel preferred to do his reading in the kitchen after dinner while his parents were talking. During the intervention period they set up a study area in his bedroom and at the conclusion of the study his mother reported that he happily did his reading there. Not surprisingly, given Joel's preference for narrative text, when asked what he enjoyed about the tutorial sessions, he reported "I liked reading the books, like *Orp* and *Encyclopedia Brown*."

Regarding his perception of himself as a reader, Joel was asked if he thought he was a good reader. It appeared that he wasn't sure at first how to interpret the question, for he answered, "I don't really [think I am a good reader,] but then continued, "I guess... sort of. Yeah, okay, I guess I am a good reader." Corroborating this new positive perception, when Joel was asked what he thought good readers do when they are experiencing difficulty with reading, he stated that "maybe [they] do the same things I do," referring to the list of strategies for decoding unknown words which he had just given me. By equating his actions with those of good readers, it would appear that he was now placing himself in the category: good reader.

Reading Skills:

At the conclusion of the study, Joel stated that one of the evidences of his having become a better reader was that he "used to skip a lot of words that didn't make sense. Now when I skip a word, I go back." His mother confirmed this observation with the following observation of Joel's fluency: "He is reading much more fluently. He is finishing words and recognizes words automatically. He is not skipping words as he used to, and he is focusing on all of the words." Regarding decoding strategies for unfamiliar words, Joel was able to state "I use the syllables. I try to find like two different words in one word. I try to use the word parts." He elaborated on this when he said that if a friend were having difficulty reading he

would, "Have them read out loud for me and see what they are having trouble with. Let them sound the hard word out by syllables. Show them to look for two words in one." His mother concurred with Joel's articulation of his new decoding ability when she noted that "he does not skip difficult words now, but takes more time pronouncing the words and figuring them out."

Joel's mother also felt that his comprehension and spelling were improved as a result of the study. "When he finishes [silently] reading something I ask him about what he has read. He used to just give a very brief, single sentence response. Now he speaks at length about what he read. I feel this means that he is understanding and retaining more of what he read." Regarding spelling: "His spelling seems to have improved a great deal. Also he seems to be more interested in spelling words correctly and even does things such as looking a word up in a dictionary to check his spelling," behaviour which she reports he did not willingly engage in before the study. Finally, Joel's grades at school were all Cs for the language heavy subjects of Language Arts and Social Studies. His most recent report showed that he had been given Bs in all of his subjects: confirmation from the school setting of his progress with reading.

Reading Strategies:

When asked about strategies he could use to help himself with his reading, Joel was quick to give the following list: Make sure you don't run on a sentence, like make sure to stop at periods. Make sure you listen to yourself. Take an educated guess at what the passage is going to be about. Don't read too fast: read at a pace." As mentioned earlier, Joel's mother noted that Joel was able to discuss his reading at greater length the conclusion of the study, possibly indicating the use of summarization strategies in his home reading.

Silvaroli's Informal Reading Inventory, Posttest: At the conclusion of the study, Joel's reading assessment found his Independent level of reading at the sixth grade level, on the cusp of the seventh grade level, for non-contextual and contextual word identification. His non-contextual word reading using the graded word lists began to slow down at the fifth grade level. What was interesting, though, was that

he used syllabification for decoding the unknown words, with a 60% overall accuracy rate for the unknown words (compared to his attempts on the pre-test which showed 0% accuracy rate for syllabically decoding unknown words) all the way up through the eighth grade list. Words he did not accurately read in this isolated context were words from which he left off, added, or incorrectly read morphological endings

Text:	crutch	noisily	distress	furnishing	joyously	duration
Substitution:	<i>crutched</i>	<i>noisy</i>	<i>distressed</i>	<i>furnished</i>	<i>joyous</i>	<i>during</i>

Joel's comprehension was found to be at the seventh grade level, for factual and inferential comprehension in both the Subskills and Reader Response format. Vocabulary level difficulty was his main comprehension problem at his Independent reading level. Joel displayed no re-reading in this reading assessment, confidently and fluently completing the reading. He did not allow nonsense substitutions; substitutions made in his contextual reading were of the non-significant error category:

Text:	That's	It is	hurtling	and another
Substitution:	<i>That is</i>	<i>It's</i>	<i>hurling</i>	<i>and the other</i>

Joel did not omit or add any fullstops in this final assessment. His reading speed for the sixth grade passage (his Independent level) was 92 words per minute, and 79 words per minute for the seventh grade passage: it would appear from this that Joel beginning to actively and automatically take measures to help himself with more difficult passages by reducing his reading speed.

Clay's Letter Identification task: (See Appendix D) Joel read each of the letters using the name and sound with 100% accuracy.

Knowledge of common consonant clusters and digraphs and special vowel combinations: (See D)

Joel's accuracy rate for the consonant clusters and digraphs was 76%. He did not read the consonant blends /gr/ /br/ /pr/ /spr/ /cr/ /dr/ /str/ in their blended form, separating the sounds instead. Joel did not correctly pronounce the /oo/ as in *foot* vowel combination.

Yopp-Singer test of phonemic awareness: (See Appendix D) Joel was 95% accurate on this task, failing to identify one of the rhyming pairs.

Table 5
Joel's Posttest Summary

	Posttest
Phonological and phonemic Awareness	
Rhyme Detection	95%
Blending	100%
Segmenting	100%
Letter Identification	
Names	100%
Sounds	100%
Common Vowel Combinations	88%
Consonant Cluster and Digraphs	76% -r clusters problematic
Independent Reading Level	
Word Recognition (non-contextual)	Grade 6
Word Recognition (contextual)	Grade 6
Comprehension	Grade 7
Reading Speed (at Independent reading level)	92wpm

Table 6
Posttest Tracking of Joel's Reading Skills

	Posttest: Grade 6 Level (Independent)	Posttest: Grade 7 Level (Instructional)
Word Count	110	126
Time	1.2 minutes	1.6
Words per minute	92 wpm	79wpm
% Miscues* (self-corrected and uncorrected)	4.5%	6.3%
% Substitutions	3.6%	4.0%
% Nonsense Substitutions	0%	0%
% Omitted Words	0%	0%
# Additional Words	2	0
% Ignored Full-stops	0%	0%
# Added Full-stops	0	0
Comprehension Accuracy	80% (vocabulary)	80%

Discussion

Results from all of the Instruments employed in the study (Quantitative: Silvaroli's Informal Reading Inventory; Clay's Letter Recognition task; Recognition of Common Consonant Clusters and Digraphs, and Vowel Combinations; and The Yopp-Singer Test of Phonemic Awareness, each administered in the pretest/posttest manner; and Qualitative: Informal Interest Inventory; and Parental Interview, both administered in the pretest/posttest manner, along with observations made in my field notes and modified miscue analysis of running records kept at intervals throughout the intervention) have been combined under the categories of reading skills, reading strategies and attitudes toward reading to develop an overall picture of Joel's reading outcomes as influenced by the methods employed in the study.

Reading Skills:

Over the course of approximately forty tutorial sessions, or twenty hours (three hours of which were devoted to assessment) Joel made considerable progress. His reading level moved from a fourth/fifth grade level for word recognition and comprehension, to a sixth grade (bordering on seventh) level for word recognition and a seventh grade level for comprehension. His identification of consonant clusters and digraphs showed improvement, moving from a 66% accuracy rate to 76%, with *-r* clusters still proving difficult for him to recognize in blended form. For contextual word reading at his Independent reading level as well as his Instructional level, Joel progressed to being much less prone to miscuing, and allowed no nonsense substitutions. He did allow some nonsense substitutions in his non-contextual word reading, however. Though still showing some inclination to add words to the text, these additions, in both the pretest and posttest were functional words, presumably added as minor adjustments to make grammatical sense of miscues, are considered less significant due to their infrequency. Joel's post-test results show that he had indeed made significant progress with regard to his previous habit of omitting words. In this area, he went from a pretest word omission rate of 4.3% and 9.8% for his Independent and Instructional reading, to a 0% omission rate for both on the posttest. This is definite evidence of the anecdotal observations made by both Joel and his mother. His automatic use of the prosodic cuing provided by

punctuation appeared to have reached a fully operational stage: Joel did not miss any of the fullstops at either of his Independent or Instructional levels, where these had been at the 18% and 22% levels on his pretest. Given the research on use of prosodic features to improve overall comprehension (Adams, 1990; Shreiber, 1991), this may have contributed significantly to the growth in his comprehension score. Indeed, he seemed to move from a syntactic standard of judging his comprehension to a semantic standard, i.e. moving from processing his reading at the grammatical level, to processing it in light of the surrounding context.

Automatic identification of consonant clusters in isolation did show improvement in the post-test measure, though it is apparent that Joel does not automatically perceive all of the common clusters as units. Difficulty with the -r clusters persists for Joel. While he read the -l clusters as units in the isolated form, I did note at the end of the tutorial sessions and in his contextual reading from the Silvaroli Inventory, that he twice substituted /back/ for black, indicating that this cluster is only sporadically recognized. While Joel did miss one of the rhyming pairs in the posttest for phonological awareness, I feel that this was simply an oversight. At the time he seemed impatient with the task and may simply have been rushing to complete it. Thus, as noted in the pretest results, phonological core deficit does not appear to present as an underlying difficulty for Joel. Similarly, his misreading of /oo/ in the vowel combinations test may simply reflect test fatigue, as this was not a combination he displayed difficulty with on the pretest or during the tutorials.

To summarize, Joel's progress in word recognition, substitutions employed, and use of the prosodic features of the text have all shown significant improvement, and seem to have impacted his comprehension positively. He demonstrated moderate improvement in his recognition of certain consonant clusters.

Reading Strategies:

Prior to the tutorials, Joel did not appear to adjust his reading speed according to the difficulty of the passage. Joel's drop in reading speed for the more difficult grade seven posttest passage appeared to

demonstrate what I had been noting as the tutorials progressed: a new strategy of actively slowing his reading down when he perceives the reading to be more difficult. Additionally, Joel progressed to more consistently listening to himself to be sure his reading made sense. Both his posttest Independent and Instructional level reading displayed a 0% nonsense substitution rate. This is substantially improved over his 33% and 66% nonsense substitution rate for his pretest Independent and Instructional level reading. Finally, Joel did employ the syllabification strategy he had articulated when he came to unknown words on the posttest, with a significantly higher success rate, approximately 60% on the posttest as opposed to 0% accuracy on the pretest. I was not able to detect whether or not he was using the compound word, or prefix/suffix strategies he had articulated in the Informal Interest Inventory.

The following tables contain a comparison of Joel's pretest and posttest results:

Table 7
Pretest / Posttest Comparison

	Pretest	Posttest
Phonological and phonemic Awareness		
Rhyme Detection	100%	95%
Blending	100%	100%
Segmenting	100%	100%
Letter Identification		
Names	100%	100%
Sounds	100%	100%
Common Vowel Combinations	100%	88%
Consonant Cluster and Digraphs	66%	76%
	-l -r and -w clusters problematic	-r clusters problematic
Independent Reading Level		
Word Recognition (non-contextual)	Grade 4-5	Grade 6
Word Recognition (contextual)	Grade 4-5	Grade 6
Comprehension	Grade 4-5	Grade 7
Reading Speed (at Independent reading level)	116wpm	92wpm

Table 8
Pretest/ Posttest Tracking of Joel's Reading Skills

	Pre-test: Grade 5 Level (Independent)	Pre-test: Grade 6 Level (Instructional)	Post-test: Grade 6 Level (Independent)	Post-test: Grade 7 Level (Instructional)
Word Count	116	174*	110	126
Time	1.0 minutes	1.4 minutes*	1.2 minutes	1.6
Words per minute	116wpm	109wpm*	92 wpm	79wpm
% Miscues* (self-corrected and uncorrected)	11.2%	14.9%	4.5%	6.3%
% Substitutions	2.6%	1.7%	3.6%	4.0%
% Nonsense Substitutions	66%	33%	0%	0%
% Omitted Words	4.3%	9.8%	0%	0%
# Additional Words	2	3	2	0
% Ignored Full-stops	22%	18.2%**	0%	0%
# Added Full-stops	0	1	0	0
Comprehension Accuracy	100%	70%	80% (vocabulary)	80%

*Joel skipped a section containing 21 words which is reflected in his speed:
153 words / 1.4 minutes = 109 words per minute.

**This figure does not include the fullstop omitted by the 21 word section which was skipped.

Attitude toward Reading:

Joel's attitude toward reading, at first glance, seemed to show moderate improvement. From his initial statement that he liked reading if he found the book enjoyable, to his final statement that he liked reading a little more than he used to, some positive movement was evident. Given that he did not come to the intervention with any particular resistance to reading, this moderate attitudinal shift seems acceptable.

It was his conception of himself as a reader which showed particularly exciting growth, and demonstrated, I felt, a deep level attitudinal shift. Prior to the intervention he felt that a good reader was someone who read with speed and accuracy, in effect, naming skills which were the opposite of his own assessment of himself as a comparatively poor reader: one who could not read as fast as his peers. His definition of a good reader, in essence, defined by what he was not, and underscored by his pre-intervention goal to "read faster and smoother." His post-intervention assessment of himself as being a

good reader and his definition of a good reader as someone who reads frequently and has read for a long time, indicates he had shifted his focus: by the end of the intervention he viewed good reading as something that was within in the grasp of those who devote time to it. In fact, it appeared that he had reached a place of self-efficacy which attributed success to effort. This is underscored by the new reading goal (to read more at night) which he set for himself at the end of the intervention, and his mother's observation of his extended reading. This shift saw him move from attributing his reading difficulty to lack of personal ability to self-efficacy determined by: selection of goals; choice of learning activities; effort expenditure; task persistence (as outlined by Butler, 1998b).

The following three diagrams display the outcomes of the study in relation to the methods used. It will be noted that what is traditionally considered a reading skill has also been included in the reading strategies summary of the diagram. This has been done purposely, for many of the poor habits Joel was employing at the beginning of the study, came to be addressed through strategy training, and thus do not fit neatly into a reading skills or reading strategies category. Though this may defy what many define as metacognitive, for Joel articulating strong reading skills as strategies seemed to an important step toward undoing some of his ineffective habits.

Figure 2
Relationship Between Method and Outcomes

Reading Skills – Joel

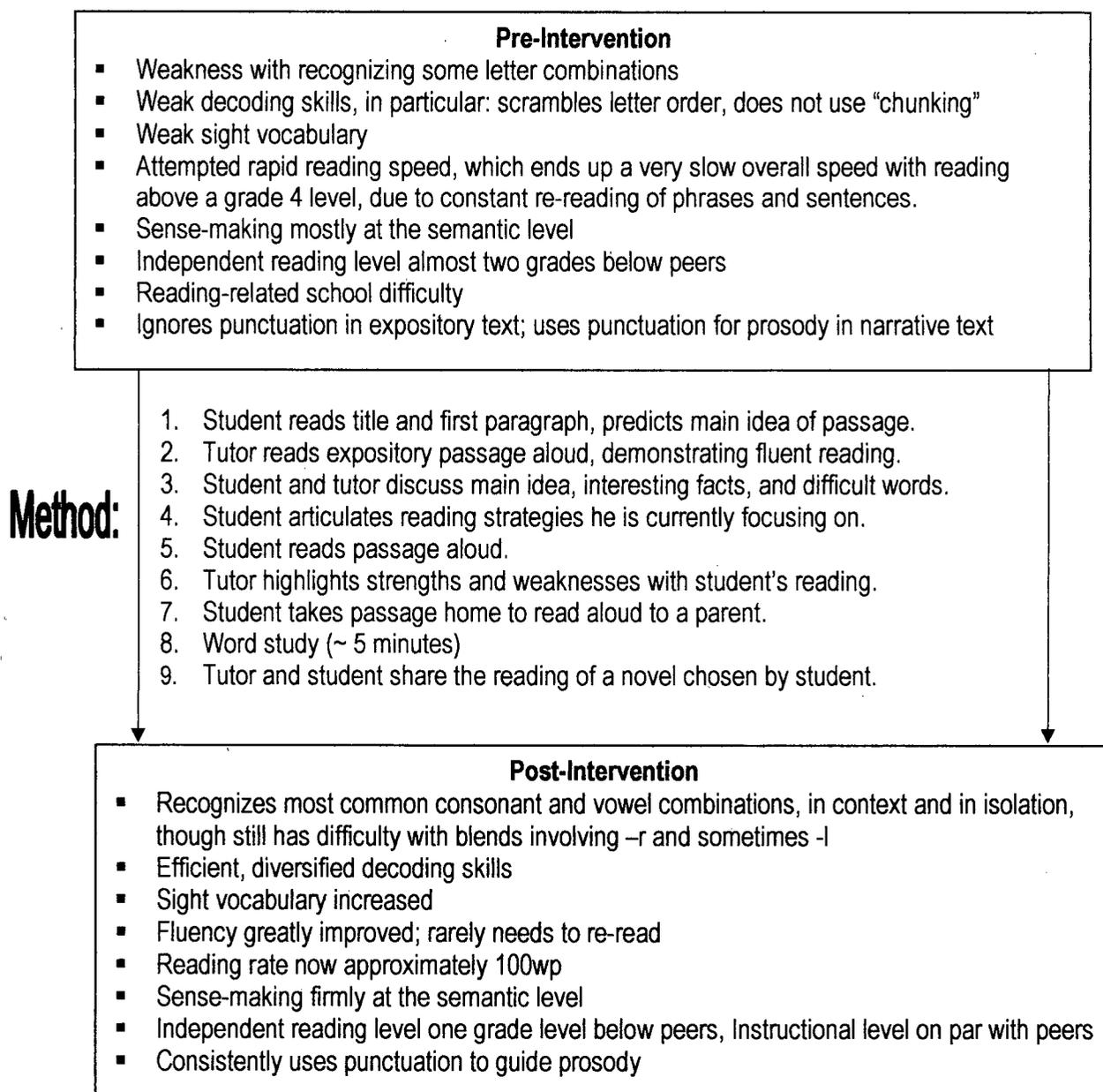


Figure 3
Relationship Between Method and Outcomes
Reading Strategies - Joel

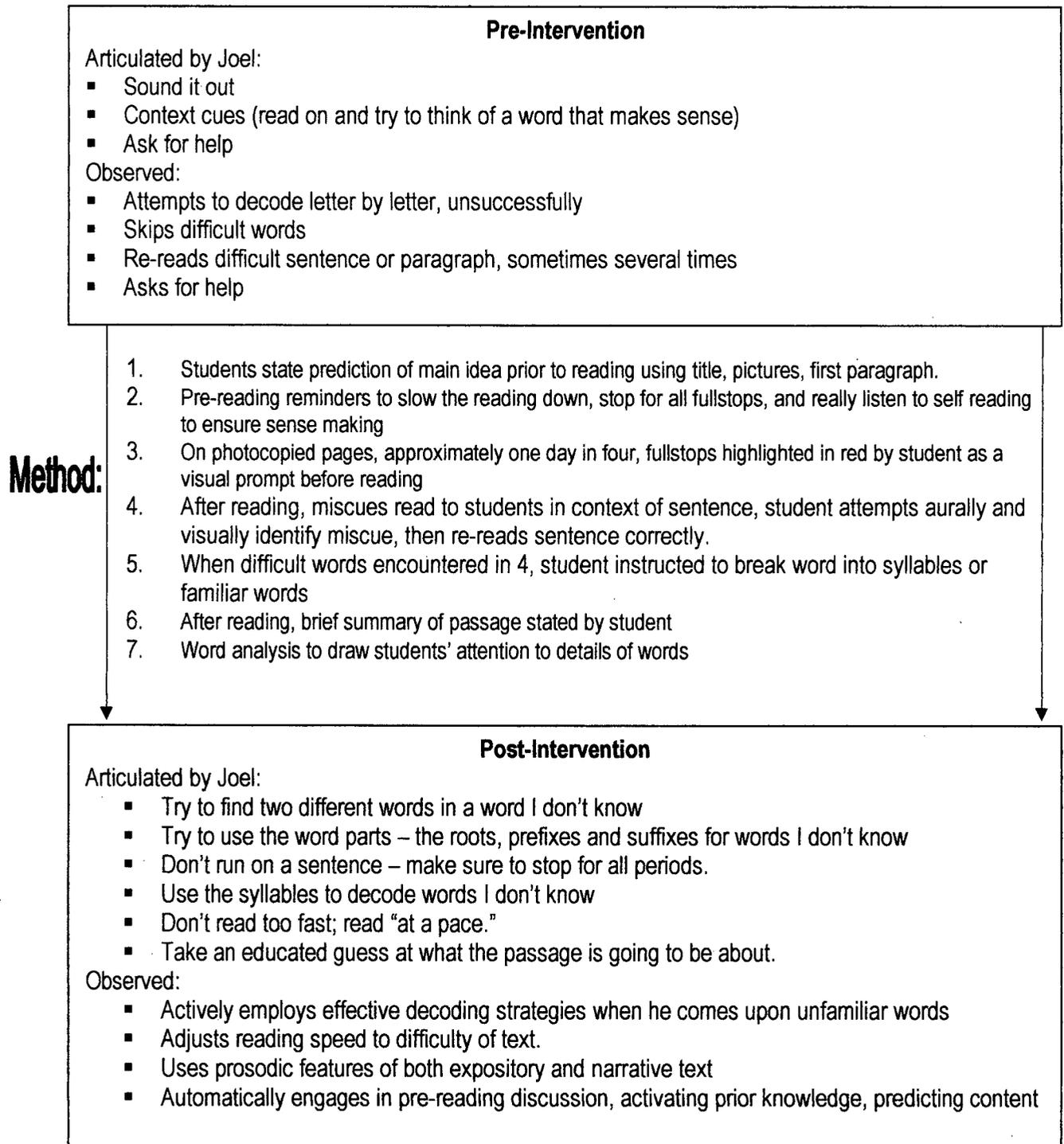
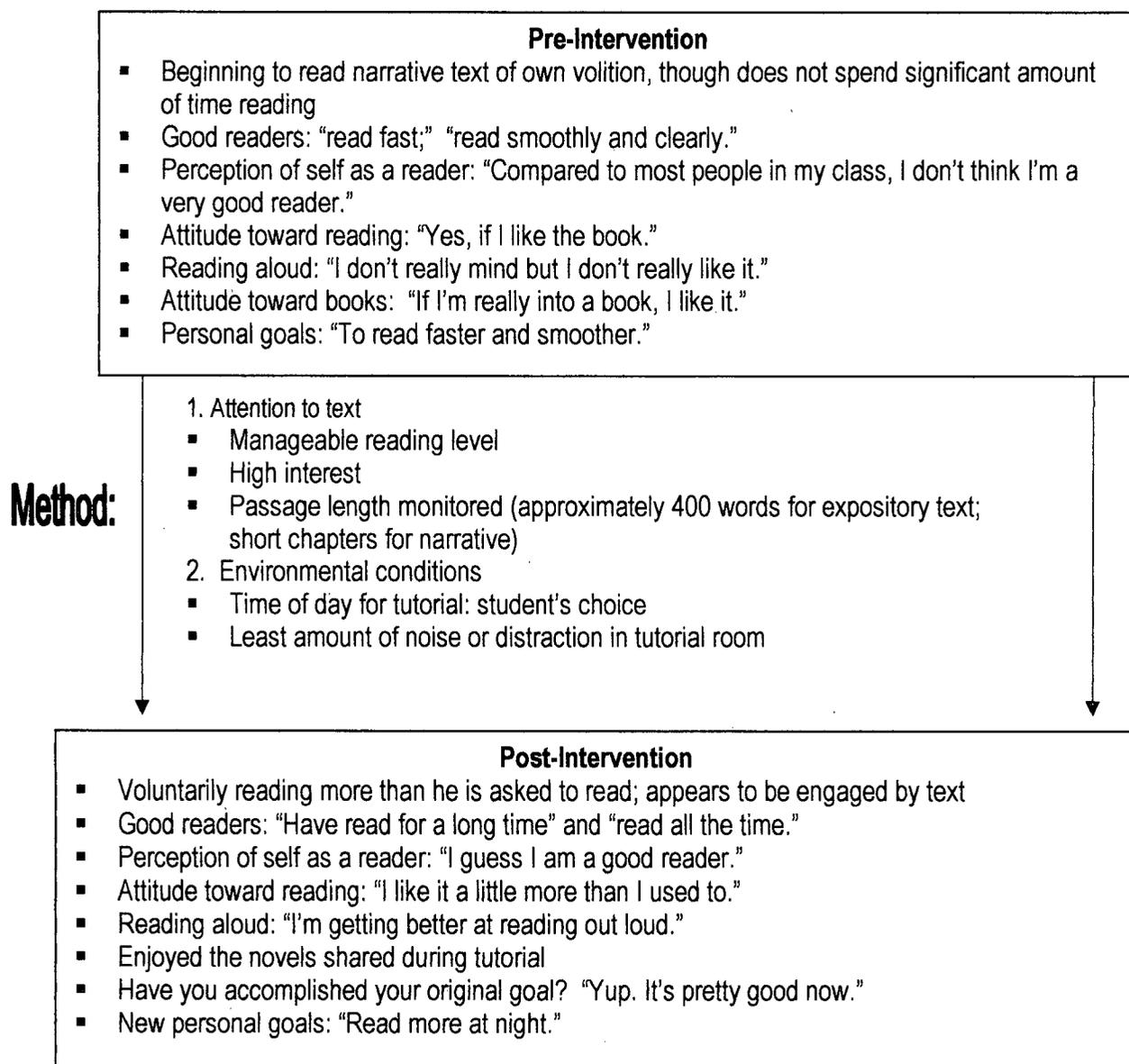


Figure 4
Relationship Between Method and Outcomes
Attitude toward Reading - Joel



Combined Observations Regarding Reading Skills, Strategies and Attitude toward Reading:

I noted toward the conclusion of the intervention, that the model of switching to the Timed Readings, once per week, had an effect on Joel's reading. While he seemed to be improving steadily in word recognition, decoding skills and strategy use with the authentic text of the magazine passages, his reading was often poor and disengaged with the commercially prepared passages. A comparison of his reading with these two materials illustrates this observation:

Table 9
Comparison of Reading between authentic text and commercially prepared fluency passage

	Oct 9	Oct 8
	Authentic Text	Commercial Fluency Text
Word Count	430	408
Time	4.5 minutes	4.5 minutes
Words per minute	96wpm	91wpm
% Miscues* (self-corrected and uncorrected)	4.7%	3.2%
% Substitutions	0.9%	0.7%
% Nonsense Substitutions	25%	0
% Omissions	0.7%	0.5%
# Additions	4	2
% Ignored Full-stops	0	0
# Added Full-stops	0	0
Re-reading behaviour	11 instances	12 instances
Comprehension Accuracy	Not measured	90%
Level of text	Grade 8	Grade 4

* This category includes all miscues: substitutions, omissions, and additions, but does not include re-reading a word or phrase initially read correctly.

It must be noted here that the authentic text from the magazine is measured as having a Lexile level (see Appendix K) of Grade 8, where the commercial text is Grade 4 level. In spite of this difference, Joel's reading of the more difficult material is more or less equivalent on the skills I was looking at. It is therefore realistic to extrapolate that had a lower Lexile level passage been used as the comparison, greatly improved reading would be noted. (See Appendix I-1 and I-2 for full running records of these texts.)

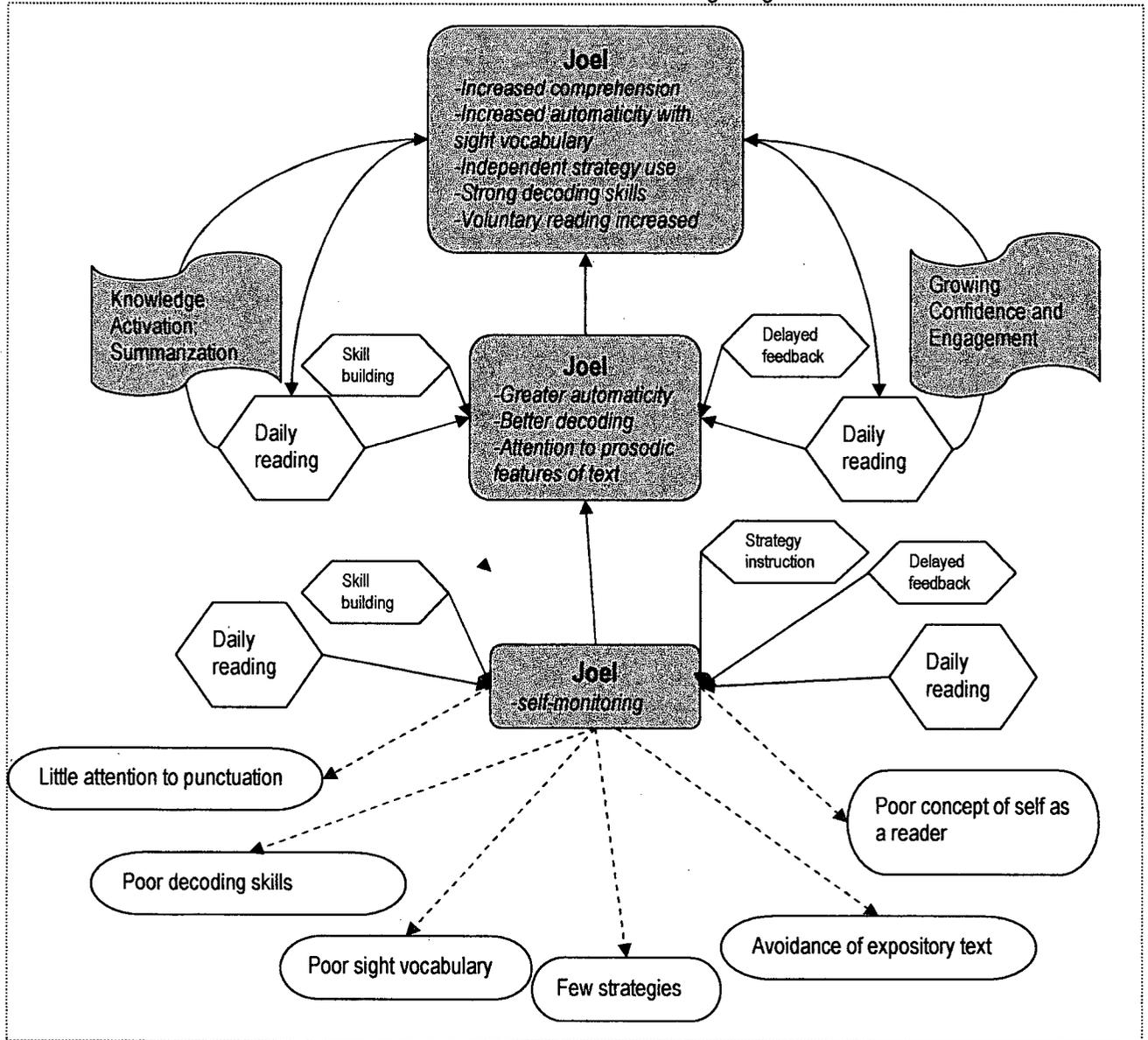
A Holistic Picture of Joel's Reading Progress

Joel entered the intervention with a strong self-monitoring strategy, which led him to self-correct when comprehension broke down. However, this excellent strategy was compromised by several other factors, which actually led to the over-use of self-correction through multiple re-readings of problematic portions of text. At the skill level, Joel's poor decoding skills and lack of automaticity with grade-appropriate sight vocabulary meant a tremendous amount of attention was directed toward basic decoding. Inattention to punctuation in expository text, particularly fullstops, meant that at times his reading was simply a recitation of endless strings of words, which he would often read and re-read to attempt to understand. Added to this was lack of familiarity with expository text reading and negative prior experiences with this genre, which contributed to Joel's poor concept of himself as a reader.

Through a program of daily high-interest expository text reading which employed repeated oral reading, with delayed feedback to address strengths and weaknesses, embedded strategy instruction, and a small amount of isolated skills work (isolated, though identified purposively as techniques which would aid decoding), Joel's automaticity and decoding skills rapidly improved. Improved automaticity and better use of prosodic features led to improved comprehension at the semantic level. What appeared to be happening was that Joel no longer had to read and re-read sentences and paragraphs: the growth in sight vocabulary and the phrasal level reading meant he was beginning to comprehend the whole passage as he was reading it. This led to growth in confidence and engagement with a genre he had previously struggled with and a feedback loop was established: growth in skills increased reading ability which made the reading process less difficult and more meaningful, which encouraged more reading, and in turn led to more growth in reading skill, while continuing to increase his confidence and engagement. Simultaneously, Joel was adding to his strategic reading by actively questioning himself about the content of the text. This growth in employing context was aided by expanding Joel's strategy use through the addition of prediction skills which engaged Joel's prior knowledge and encouraged thoughtful processing as he read, with the net effect of increasing semantic level comprehension. Here a second feedback loop

was initiated: increased comprehension, led to more reading and thus more experience applying strategies, leading not only to better overall reading, but also contributing to the growth of confidence and engagement. The following flowchart illustrates this process:

Figure 5
A Holistic Picture of Joel's Reading Progress



Craig's Case

Results of Initial Assessment

Informal Reading Inventory and Parental Interview: (See Appendices B and C for these instruments)

Craig's Profile

Craig was a 12 year old male who at the outset of the study was nearing the end of the sixth grade. Craig lived with both of his parents and a younger sister. His older sister, recently graduated from University, lived on her own. Generally speaking, Craig's mother said that he is very action oriented and spends most of his free time outdoors in one sporting endeavour or another. He played on a hockey team and a soccer team, and enjoyed biking, skateboarding, street hockey and golf. Craig had many friends at school and regularly invited them over after school to participate in road hockey, skateboarding or bike racing outside his home. Craig enjoyed watching television, though his mother reported that his time spent watching television was carefully monitored. His favourite shows were "real-life shows" such as *America's Most Wanted*, or programs from the Discovery channel, or animated satire such as *The Family Guy*. Similarly, he enjoyed watching cooking shows with his mother. Using the computer in his free time to play games or chat with his friends on MSN were other favourite activities.

Impact of Parents' Education

Craig's parents were both university educated. Craig's mother was employed as an executive search consultant and his father was a lawyer who recently moved his practice into the family home to allow him more time with the family. Craig had been positively impacted by his parents' and sister's educational and vocational backgrounds: he was very proud of their accomplishments, especially his sister's. Until recently, his mother reported, Craig felt that it didn't particularly matter that he was struggling in some of his subjects at school for he was going to "become a famous hockey player and it wouldn't matter." (Craig excels in his many sporting endeavours.) Just prior to the study, Craig's mother sat down with him and began "doing the math" to show Craig his chances of actually making it to the National

Hockey League, cleverly bringing Craig to the conclusion that he was going to need a back-up career plan. When asked about what he would like to do in the future, Craig reported that he would like to become “a lawyer or a pro hockey player or an actor.” Apparently, the math lesson had made an impact. Craig, himself, stated that though he does not particularly enjoy school he knows that it is important “because it will help [him] in the future.”

Experience with Reading

In Craig's home, reading and literacy-related activities had always been important. His parents read the newspaper daily, read work-related documents at home, and read for pleasure when time allows. Craig was cognizant of the place of written language in his parents' lives and when asked if he knew anyone who was a good reader, his automatic response was that it was his parents “because they read a lot.” When the children were younger, the family regularly attended children's theatrical productions. At the time of the study, a tremendous amount of family time was devoted to youth amateur sport leagues, with the children participating in various team sports and the parents often coaching or managing the teams, leaving less time for family literacy experiences than in previous years. Craig's mother reported that books had always been a part of his life and that he enjoyed hearing stories from a very young age. She recalled times when Craig was a busy toddler and his nanny would follow behind him as he played, reading aloud from a book he had requested but could not sit still long enough to finish. In his preschool years he had many favourite story books which he requested over and over again. Neither Craig nor his parents recalled that learning to read was particularly dramatic though it was mildly difficult for Craig in the early stages. When asked how he learned to read Craig conjectured: “Maybe my parents were reading to me and then I tried like learning words. I was like five or six. In school they gave us really easy books to read and the book would tell us how to pronounce it.” Because Craig's mother was dyslexic, and believed her own father was as well, Craig was professionally tested for dyslexia during his Kindergarten year when it was noted that he was regularly reversing his written numerals. Results from the tests administered seemed to indicate that no dyslexia was present. However, Craig's reading failed to keep pace with his

peers as the school years went on. His parents placed him in a private afterschool learning institute to receive extra help with his school work. They did notice some improvement in his ability to handle school assignments, but also began to realize that it was his reading ability which was causing him difficulty in literacy-based subjects. His mother's observation: "It's not the big words that are the problem so much as it is the small words he regularly misreads."

When asked about reading, Craig reported that reading really held little interest for him: "If I'm really bored I will read. But if I am having fun I don't want to stop to read, I hate it". His mother confirmed this, stating that at times even the thought of having to stop what he is doing in order to read would reduce Craig to tears. Hearing books read aloud likewise held little interest, though when asked if he liked to hear anything at all he reported, "Funny books, mysteries, some adventures. I don't like made-up adventures. Sometimes she (his teacher) will read stuff about Ancient Greece or Edgar Allan Poe. I like Edgar Allan Poe stuff." Craig's mother reported that they tried every genre available ranging from the latest "hot kid-picks" to ever-popular easy-reads such as the Hardy Boys series, but the only time she saw him truly become excited about reading was when he had a new sports magazine or a biography of a hockey player he admired. Craig saw reading aloud for his parents as "okay," but not particularly pleasurable because, "It takes me way longer.... I'm not good at reading out loud." Reading aloud for his teacher made him feel "uncomfortable." In his words: "I feel like it will ruin my mark or something." And reading in front of his classmates was particularly difficult: "It makes me uneasy... because I'm a bad reader. It's like reading aloud sucks. It's awful."

Unfortunately, though invited to contribute, Craig's sixth grade teacher was unable to participate in the study, and thus her insights into his abilities and areas of difficulty are not obtainable. However, Craig's mother reported that he always enjoyed school and year by year forged strong bonds with his teachers. He eagerly got up in the morning on school days and was generally ready and waiting long before he must leave for school.

Experiences with Listening, Speaking and Writing

English was Craig's first language and there were no other languages spoken in the home. His early language development appeared to have been routine, though his mother recalled that he spoke earlier than many children of his age. When I first met him I noted that Craig's speech occasionally contained words or phrases which seemed to reflect a maturity and intellect beyond his age, though generally he tended to speak in short sentences, and experienced some difficulty with enunciation. His mother felt that he might not be hearing all of the sounds in spoken words and thus was not reproducing them in his own speech. Craig reported that he did not mind listening to others speak provided that it was interesting. Referring to the public speaking his class had recently participated in, Craig states: "If it gets boring I try to look at the guy because teachers take off marks if I am like fooling around in my desk, so I try to in tune if I possibly can. We are starting to do more speaking in front of the class now because my teacher wants us to practice." Clearly, listening activities were not particularly easy for Craig.

Craig enjoyed writing at school under select conditions. Asked if he likes to write, he states, "[It] depends what it's about. If it's a story about something I like, I like it. But if it's something I don't want to write about, I hate it. I like something where our teacher makes us write something like, something nice about a friend or think up something that's mean about them. So we have to do a happy scene and an unhappy scene. I liked writing that. I like writing stuff about people that I really know. I hate writing book reports. Sometimes I forget to put stuff in and I lose marks really badly." Craig's mother noted that spelling has often been an area of difficulty for him.

Concept of Self as a Reader

When asked to name someone he thought was a good reader, Craig's first response was that his parents were good readers because, "They read a lot. Like on a two week vacation my mom will read five five-hundred page books....She reads a lot." When asked if there was someone in his class he thought was a good reader, he replied that Chloe was a good reader: "She's smart. She reads almost everything. She can spell all the words. Sometimes when we have a spelling bee...she usually always comes in first."

Issues of the amount a person reads and the time in which they do so were important to Craig's concept of himself as a reader. He emphatically replied, "No," when asked if he felt that he was a good reader; his explanation for why he felt this way: "I don't know, it takes me like twenty minutes to read twenty pages. Books that some people don't think are long are really long for me." His main reading goals for himself were to read more and to try to become more interested in narrative text. His elaboration on this final goal was enlightening: "Getting more into books: getting more into bad books I don't like, like books the teachers give us for book reports, stuff like that. They're usually novels I don't like."

Use of Reading Strategies

Craig was able to articulate three reading strategies that he used when he came upon unfamiliar words: using context cues; asking someone else; and skipping the word. For words he couldn't decode he stated the following strategy: "I just try to figure it out as best as I possibly can. I figure out what it means from the content, like it usually says what it means after it." Secondly, he employed the following: "If it's an important word and I can't find it in the content I go ask [the teacher]. If it's not that hard, I skip it." He said that he asked his parents about words he did not understand when he was at home and they generally helped him to look it up in the dictionary. Craig felt that good readers generally "read the content" when they have trouble with their reading, likely indicating that he felt using context cues to be the superior strategy of the three he articulated.

Silvaroli's Informal Reading Inventory, Pretest: Craig's initial reading assessment found him reading independently somewhere between the fourth and fifth grade level for contextual word recognition; in this Independent level contextual reading, his errors included substitutions such as /a/ for *the*, /will/ for *do* which did not alter the meaning of the text, and omissions of small words such as /so/, /be/ and /not/ which were of greater importance for understanding the passage. These types of substitutions and omissions were pervasive throughout the Inventory. For non-contextual word recognition, Craig began to experience difficulty with fluency at the third grade level, and severe difficulty at the fourth grade level. Most of his

difficulty arose from incorrectly reading the morphological endings of words or incorrectly reading the mid-sections of words, though the majority of his substitutions in this non-contextual reading were real word substitutions. His word substitutions also seemed to indicate that he was somehow stuck in a phase of logographic word recognition which often focused on beginning and ending sounds in words, but not the internal features, resulting in frequent errors with sight reading (Ehri, 1994). For example, in the graded word lists, he substituted /chef/ for chief (third grade list) and /active/ for attractive (fourth grade level); /wooden/ for widen (sixth grade level). Craig jumped to Frustration level for contextual reading with the sixth grade passage, and here demonstrated both of the difficulties mentioned above for contextual and non-contextual word reading: difficulty with morphological endings, and substitutions or omissions of function words such as: articles, demonstratives, interrogatives, prepositions, conjunctions, and auxiliaries. Additionally, he demonstrated difficulty with longer sentences, adding fullstops where there were none, in effect producing shorter sentences. An example of his reading from the sixth grade level Subskills format illustrates this:

Text: Each rider would pick up Blaze along the trail and force him into a narrow canyon, where Pete would be waiting.

Substitution: *Each rider picked up Basil along the trail and forced into a narrow canyon. Pete would be waiting.*

All of this reflected negatively in his comprehension when he was unable to answer some of the inferential level questions. While his Comprehension tested at the fifth to sixth grade level in the Subskills format, I found myself questioning whether some of the knowledge he used to answer the questions came from his background knowledge rather than from the reading he was doing. Corroborating this suspicion are his results from the Reader Response format which showed that Craig scored very low on his understanding of the problems in the passage, and understanding of the outcomes of the passages for both the fifth and sixth grade levels. It does appear that he is focusing his attention at the word level and doing little semantic processing of the text as a whole.

Clay's Letter Identification task: (see Appendix D) Craig was able to identify all of the letters of the alphabet by name, but experienced difficulty with the sounds for /w/ (upper and lower case), the sounds for /J/ and /G/ (upper case) and the sound for /U/ (upper case) which he pronounced as short /a/.

Knowledge of common consonant clusters and digraphs, and special vowel combinations: (see Appendix D) Craig found reading the consonant clusters in their blended form to be very difficult, with an accuracy rate of 55%. In particular, the clusters /br/, /pr/, /spr/, /str/, /fr/, /tr/, /cl/, /fl/, /sl/, /sk/, /sw/, /tw/, /sm/, and /wh/ were all read separating the two sounds.

Yopp-Singer Test of Phonemic Awareness: (See Appendix D) Craig experienced difficulty with the phonological awareness item of this test: rhyming. Though he scored 80% on this item, he was unable to automatically produce a response, requiring about 3 seconds for each rhyming pair to determine whether or not they rhymed. This signals a definite difficulty at the foundational level of phonological processing. For the next two tasks of measuring phonemic awareness, Craig was able to blend sounds into words with a 93% accuracy rate, but seemed to have trouble discriminating the short vowel sounds for /a/ and /u/ in the medial position of the CVC words, blending /c-ut/ to produce /cat/ and /c-u-p/ to produce /cap/. He had no difficulty with the segmenting task, considered in the literature (see Gelzheiser, 1998) to be more difficult than the rhyming and blending tasks scoring 100%.

Table 10
Craig's Pretest Summary

	Pretest
Phonological and phonemic Awareness	
Rhyme Detection	80% No automatic recognition of rhymes
Blending	93% Difficulty discriminating medial short /a/ and /u/
Segmenting	100%
Letter Identification	
Names	100%
Sounds	91% Problematic sounds: /l/ /g/ /j/ /w/ /w/
Common Vowel Combinations	100%
Consonant Cluster and Digraphs	55% -r, -m, -w clusters problematic
Independent Reading Level	
Word Recognition (non-contextual)	Grade 3
Word Recognition (contextual)	Grade 5*
Comprehension	Grade 5/6
Reading Speed (at Independent reading level)	93 wpm

*I had misinterpreted Craig's score on the Graded word list, erroneously thinking they indicated testing should begin at the grade 5 level. His reading of the grade 5 passage reflects this error on my part: indicating that grade 5 was somewhere between his Instructional and Independent level, and his reading of the grade 6 passage indicated this was his Frustration level. Unfortunately, evaluation was not done on the grade 4 level passage, which in retrospect appears to have been his Independent level

Some of the errors Craig made during his reading were of interest as I wondered if they might hold insights into his reading difficulty beyond that which my initial assessment instruments measured. Using the original running record and the tape recording of Craig's reading from Silveroli's Informal Reading Inventory, I made a closer analysis of his reading looking beyond his word recognition and decoding skills to some of the finer mechanics of reading. Of particular interest to me were: Craig's regular addition and deletion of fullstops and his apparent freedom to add, delete and substitute words which often changed the general meaning of the text. I noted his reading speed and the percentage of miscues made in order to establish a baseline to monitor his fluency (speed and accuracy) for the rest of the study. My premise was that his addition and deletion of fullstops, poor sight vocabulary and logographic reading of individual words signified a failure to fully focus on the text. And were also contributing to his overall comprehension difficulty. A summary of the specific elements I decided to track follows:

Table 11
Pretest Tracking of Craig's Reading Skills

	Pretest: Grade 5 Level (Instructional/Independent)*	Pretest: Grade 6 Level (Frustration)
Word Count	116 words	174 words
Time	1.25 minutes	1.33 minutes
Words per minute	93wpm	134wpm
% Miscues* (self-corrected and uncorrected)	6.0%	10.9%
% Substitutions	3.4%	6.3%
% Nonsense Substitutions	0%	0%
% Omitted Words	2.6%	4.6%
# Additional Words	0	1
% Ignored Full-stops	0%	0%
# Added Full-stops	0	3
Comprehension Accuracy	80%	80%

*I had misinterpreted Craig's score on the Graded word list, erroneously thinking they indicated testing should begin at the grade 5 level. His reading of the grade 5 passage reflects this error on my part: indicating that grade 5 was somewhere between his Instructional and Independent level, and his reading of the grade 6 passage indicated this was his Frustration level. Unfortunately, evaluation was not done on the grade 4 level passage, which in retrospect appears to have been his Independent level

Planned Intervention Based on Initial Assessment

For purposes of instruction and evaluation, the data on Craig's reading is addressed from this point forward in three broad categories: reading skills, reading strategies and attitude toward reading, as these seemed to be the main themes which presented from the data for both participants.

Reading Skills:

What emerged from the initial assessment was the picture of a reader who appeared to be applying a lexical standard to evaluate his comprehension as he was reading (Baker, 1984, cited in Alexander, et al., 1998) and thus produce utterances which made sense at the phrasal level, and little semantic sense with regard to the whole passage. Craig seemed to feel quite free to add and delete text or word endings, as well as fullstops, as he read, to create sentences which made partial sense but did not represent the text as printed. Not fully understanding the nature of Craig's difficulty, at this stage I felt the

remedy to this was to increase Craig's sight vocabulary, and help him to pay closer attention to the text (including punctuation) as it was printed. The main vehicle, I felt, should be experience with plenty of meaningful text, starting at his Independent reading level and gradually increasing in difficulty.

Given Craig's family history of dyslexia, difficulty with basic phonological and phonemic awareness tasks, spelling difficulties and his apparent tendency to not listen to himself as he read, I reasoned that he was experiencing auditory / phonological processing difficulties bordering on the extreme level of difficulty. Considering these impediments, and the lack of an early diagnosis, I felt he actually read remarkably well, and that his oral reading and comprehension scores which fell approximately two years below grade level seemed to indicate that the processing difficulty was addressable through the methods set out for the capacity building study. His poor scoring on Inferential comprehension, I reasoned, may have been a reflection of attentional reserves directed towards decoding combining with his probable auditory processing difficulty, to make higher level processing of the passage difficult. Given all of this, the bulk of skills work which I proposed to carry out with Craig pertained to that which would impact on phonological processing, blended with small amounts of explicit decoding instruction.

One of the skills I planned to explicitly address in the early stages of the intervention was the skill of using punctuation to guide prosody. Initially, I planned to remind Craig prior to reading to use the fullstops to pause, and once per week for several weeks to have him highlight the fullstops in red on a photocopy of that day's reading as kinesthetic action to make the punctuation visually explicit.

Reading Strategies:

Though Craig articulated three strategies for handling unknown words (using context cues; asking someone else; and skipping the word), the initial assessment did not show him using any of these strategies, beyond the ineffective strategy discussed below. What was also immediately apparent from the initial assessment was that Craig did not adjust his reading speed to the difficulty of the passage. His speed increased significantly between his Instructional/Independent level and his Frustration level;

percentage of omissions and substitutions also increased and he began adding fullstops where none existed, and deleting others.

Foundational level strategy training was thus seen as especially important for Craig in order to help him take control of the reading process and take steps to help himself when sense-making broke down. An important goal was to help Craig actively slow his reading down when experiencing difficulty by encouraging him to continually ask himself if what he was reading made sense.

As discussed earlier under reading skills, it was noted in the initial assessment that Craig occasionally disregarded fullstops, and regularly added them in. In order to make this work, he would then add function words such as: articles, prepositions, and modifiers, and/or change verb tenses and morphological endings in an attempt to provide syntactically correct utterances which often did not make sense in the larger semantic context of what he was reading. At times when he was reading he used fewer than half of the words as they appeared in the text of the sentence or paragraph and did not stop and attempt the reading again, but simply carried on. In the early weeks of the intervention, I felt that the remedy to this "habit" was to switch on a sense-making self-monitoring strategy, i.e. to get Craig to evaluate his reading for sense with regard to the larger meaning of the text. My hope was that as he began to think of the larger sense of the passage he was reading through pre-reading prediction and post-reading discussion of the main idea, that he would more easily monitor his reading for sense and apply the self-corrective measure of re-reading when he noted he was manipulating the text. I also planned to begin each reading tutorial in the initial stages with the reminder that everything Craig read must make sense, and if it did not he should stop and re-read. Thus instilling a self-monitoring strategy for making sense at the semantic level and for taking control of the reading process was the main foundational goal I had for Craig at the outset in the area of strategy development.

Attitude toward Reading:

Another major goal for Craig was to help him move beyond his perception that reading was difficult. He did seem to possess a level of intellectual maturity which allowed him to recognize the

importance of learning to read well. Getting past the emotional issues was recognized as likely to be more difficult to achieve. Thus, short daily sessions using reading material of high-interest, low reading-level were planned, both to chip away at Craig's emotional resistance by building confidence and by strengthening the skills he required to read fluently and attend to higher level comprehension, showing him the reading process does not have to be difficult. In essence, I wanted to see Craig shift the attribution of his reading difficulty away from, "I'm a bad reader; reading is too difficult," to "When I am reading there are specific measures I can take to help myself when reading becomes difficult" (see reading strategies above).

Craig's interests definitely ran toward that which involves real-life, action and novelty. His expressed preferences in reading material suggested that he preferred true-to-life accounts, and satirical humour such as that found in Louis Sachar. His enjoyment of sports magazines may reflect not only a preference for reality, but may also be accounted for by the shorter nature of the selections. He seemed to be quite daunted by passages or books he considered to be long. Thus, in addition to providing high interest material to maximize Craig's engagement with the text, it was seen to be important to monitor the length of passages, chapters and books in reading material selected for the tutorials.

Additionally, when providing delayed feedback regarding his reading, I wanted to be careful to accentuate the positive aspects of that day's reading before tackling that which needed attention, in order to begin building positive perceptions of himself as a reader. Stated formally, goals for Craig were as follows:

Figure 6
Intervention Goals for Craig

Goals for Craig

Goal 1: Craig will read with greater accuracy.

Objectives:

1. Craig will read extensive amounts of connected text over the course of the intervention
2. Craig will read aloud during daily tutorial sessions
3. Craig will listen to himself read and re-read anything that does not make sense
4. Craig will listen to tape recordings of himself reading to develop his ability to identify miscues
5. Craig will actively stop for fullstops and new paragraphs, and pause for commas.
6. Craig will engage in repeated reading
7. Once per week, on a photocopied passage, Craig will highlight the fullstops with red to help exaggerate the required pause.
8. Craig will be taught to look for blends, digraphs, and rimes in words and to use analogy to decode unfamiliar words, particularly names where context does not help with decoding
9. Craig will engage in small amounts of word analysis work to build grapho-phonemic skills.

Goal 2: Craig will comprehend text on a semantic level

Objectives:

1. Craig will predict the passage's main idea using the title, picture (if present) and first paragraph before reading the full passage.
2. Craig will reflect on what he has just read at the conclusion of each passage
3. Craig will receive delayed feedback on his reading which encourages him to identify the miscue (as opposed to having it identified for him)
4. Craig will be encouraged to aim to read with accuracy in order not to miss the less salient items of the passage

Goal 3: Craig's willingness to read will be increased

Objectives:

1. Craig will read high interest expository text
2. Craig will daily read small amounts of narrative text from novels of his choosing.
3. Craig will receive delayed feedback after his reading which highlights that day's instances of strong reading before addressing areas of weakness
4. Craig will be involved in discussions regarding the improvement of his reading where the correlation between practice and facility will be highlighted (analogy: importance of practice for the athlete)

Goal 4: Craig will begin to employ an increased repertoire of metacognitive strategies to his reading

Objectives:

1. Craig will actively slow his reading down when experiencing reading difficulty
2. Craig will ask himself, "Does this make sense?" as he reads
3. Craig will re-read phrases, sentences or paragraphs which are not making sense
4. Craig will develop a personal list of metacognitive strategies to aid his reading
5. Craig will frequently articulate "his" reading strategies prior to reading

The Tutorial Sessions

Keeping both Craig's goals for himself and my goals for him in mind was a constant overarching concern throughout the tutorial sessions. Craig's stated goals for himself were: to read more and to try to become more interested in narrative text. Unlike my assessment of Joel's reading, it became apparent as we moved into the tutorial sessions, that my initial assessment of Craig's reading was not fully accurate and therefore I found myself questioning whether my goals for him were appropriate for a good portion of the intervention. However, at the outset of the intervention, I wanted to see Craig's accuracy and ability to read the text more closely developed and see if the basic strategies introduced and applied through oral reading would impact his phonological processing and comprehension. Addressing these skills and strategies in an atmosphere sensitive to providing maximum engagement was to help address my affective goal of helping Craig achieve a more positive concept of himself as a reader.

My initial choice of expository texts, however, proved to be inappropriate for these goals. We began the tutorial sessions using the *Wild Side*, high interest/low reading level texts described in the methodology. I had particularly chosen one of the three readers, *Crime and Punishment (Billings & Bilings, 2001)*, because it had true-life accounts that Craig had expressed interest in, and thought it would be the engaging form of expository text reading I felt he needed. I had also chosen, *Extreme Sports (Billings & Bilings, 2001)* with Craig's love of sports in mind. As predicted, Craig did choose *Crime and Punishment* as the first reader that he would work with, but quickly opted to try selections from *Extreme Sports* and *Close Calls (Billings & Bilings, 2001)*. A word regarding these readers is in order at this time. When planning this study, I was uncertain as to how I would find the amount of properly leveled text for the participants. After searching the library and various publishers' catalogues, I thought that these readers would be a good starting place as they provided controlled reading with topics of interest to pre-teen boys. However, concern for tight control of text level was soon discovered to be of less importance than other factors. While Craig initially seemed to be interested in the topics of these readers, it became apparent that the length of each article was a source of frustration. Inevitably, after choosing an article to read,

based on the title and the photo preceding the text, he would flip through the pages to see how long the passages were. I could actually see him slump, as though deflating, if they filled two full pages. He then appeared to dive into the reading with the intent of getting through it with little regard for accuracy at the lexical, syntactic or semantic level. It soon became apparent that the very difficulties I was attempting to help him overcome were in danger of becoming more deeply entrenched through the use of these 1000 word (approximate) passages. After approximately 15 sessions with these readings, we moved into using expository text passages found in children's popular culture. In particular, National Geographic Kids provided a rich source of expository reading whose topics and shorter passages provided the engagement Craig required. (See Chapter 2: Text selection, for an elaboration on this note.)

Reading Skills:

Concern for Craig's disregard for punctuation led me to wonder if he simply wasn't aware of how punctuation is used. I lifted several sentences from a piece he had read the day before, and removed the punctuation. Each sentence in the exercise became increasingly more punctuated. Craig's task was to add the punctuation; he was able to independently handle this task. I also had him highlight the fullstops on a photocopy of a reading passage once per week, for several weeks, prior to reading, to make the fullstops more visually salient and function as a reminder to heed them.

I noted an interesting phenomenon over the course of the tutorials. At times the text would employ nonsense or colloquial words which should have been easily decoded using analogy. Craig would read the rime portion of the word correctly, but miss the onset. My field notes elaborate on two instances of this:

27 October 2003

- Letter identification: Craig still has some difficulty with the letter W. I don't know still if it is the visual discrimination or lack of familiarity with it. I suppose we have done enough reading over the 45+ sessions we've had together that lack of familiarity with it should not still be problem
 - Back in July, he read:
Wippity for Zippity
 - Today he read:
Whipping for zipping

- As I recall, he had difficulty with the sound for W in the pre-test. I think all that I can say about this is that visually W and Z present difficulty for Craig and he is going to have to rely on sense-making to help himself. Unfortunately, as in the case of non-words or colloquial expressions above this strategy does not help....

Notwithstanding, decoding skill increasingly became less of a concern for me early on in the tutorials. Using delayed feedback, I would re-read a selection of sentences where Craig had miscued, using his miscue, while he followed along in the text. The majority of the time he was able to identify the miscue and accurately pronounce the word. When he couldn't, I covered the word with a piece of paper, showing him the word syllable by syllable. He easily read the word using this technique. No other explicit syllabification work was done with Craig; he did, however, begin to list it early on as a strategy he could use for tackling unknown words and I did begin to see him independently use it when he was stuck.

I was concerned in the beginning that there could be issues of visual discrimination at work in Craig's prolific habit of word substitution. I set up the following exercise:

Figure 7
Visual Discrimination Exercise - Craig

of	for of of from for of for from of for of
for	of for from for from of for for of for
from	From for from of for from from for of from

My field notes explain the task and my observations:

17 June 2003

- Craig had to circle the words on each line identical to the words in the box. He was able to do this with 100% accuracy and with speed
- He does not have trouble discriminating these words in this context and did not have trouble with automatic recognition of them in a game of Snap where speed is of the essence
- However, he regularly confuses them in his reading. *Why?*
- Best to continue to work on slowing the reading down and having Craig listen to himself reading.

I felt that this task effectively ruled out visual discrimination difficulty as an explanation for Craig's substitutions.

It became increasingly clear as the intervention went on that something other than poor reading skill was at work in Craig's habit of manipulating the text. I felt confident in ruling out visual discrimination

difficulty and poor decoding skills. Engagement with the text was an important factor (see Attitude toward Reading, below, this section) and I continued to feel that increasing sight vocabulary would help. However, I knew there was something else, though I couldn't identify exactly what it was for some time. More than halfway through the tutorials, I realized he was not simply adding and deleting fullstops at will. In fact, ignoring fullstops was a problem which improved as we worked on the skill of paying attention to fullstops, however, addition of fullstops persisted (see Appendix L-2).⁵ Once I noted this, it became clear that he was attempting to shorten long and/or complex sentences through the addition of fullstops. Inability to hold long strings of words in working memory is seen in the literature (see Swanson, Cooney, & O'Shaughnessy, 1998) as a common problem for those with a phonological core deficit. An example of this from the pre-test Informal Reading Inventory was given earlier (though several instances were noted). Further examples from my running records seem to substantiate the conclusion that Craig's addition of fullstops to long and/or complex sentences was a reflection of an ineffective coping strategy to compensate for working memory difficulty. An example follows:

25 June 2003

Text: They often wear wet suits and life jackets in case they get flipped into the water. And they wear helmets in case they hit a rock when they are dumped overboard. (new paragraph) Rafters also wear waterproof shoes.

Substitution: *They often wear wet suits and life jackets. In case they get flipped into the water. And they wear helmets in case they hit a rock. When they are dumped overboard rafters also wear waterproof shoes.*

I continued to question my working memory theory. An excerpt from my field notes demonstrates another piece of the puzzle regarding my slow realization that Craig's manipulation of text involved difficulty with working memory

20 October 2003

- Craig's reading was good today, though not as "perfect" as Friday. But when I stopped him early on and reminded him to be mentally checking for making sense and doing his best to read every word, he did continue with increased self-correction in evidence

⁵ Tape recording of the tutorial sessions made both participants nervous. I stopped taping them soon after the initial assessment, and continued to keep frequent running records of their reading. Unfortunately, as I had not realized that working memory evidenced by the addition of fullstops was a major problem for Craig, I fear I may not have been as careful to listen for them and record them on the running records.

- An example:

It was a difficult situation.

Craig read // for *It*, but self-corrected by re-reading when the sentence as read did not make sense. However, later on, a sentence written:

Then she held that thorn between her teeth and used it to pluck out the thorn in her foot.

Was read:

When she held that thorn between her teeth and used it to pick out the thorn in her foot.

The substitution of /pick/ for *pluck* did not change the meaning of the sentence, however, substituting /when/ for *then* resulted in an incomplete sentence which he did not self-correct.

- This may well have to do with the inadequate working memory of some poor readers: he couldn't seem to remember back to the beginning of the sentence to know that the way he read it didn't work. I have noticed this phenomenon often with Craig when he is reading long and complex sentences. What to do about it is still the big question....

During the second half of the study, word analysis work using Making Words and Prefix and Suffix work was undertaken. See Research Design: Word Analysis for a description of the activities. Knowing Craig's need to develop phonetic representation in his working memory, I attempted to orally present the words we would be working with in the prefix/suffix work and have him orally identify the root words before undertaking the written part of the task, which was to divide the words on paper. Even in the short time (six ten-minute segments) we worked at this word analysis task, the aural/oral part of the task became noticeably easier for him to complete.

Repeated reading of text was used with Craig for approximately the latter two-thirds of the intervention to help him build his sight vocabulary and learn to use the prosodic features of the text. Chapter Three, Iterative Modification of Research Design explains the process used. Using Listening Previewing, after making a prediction of the content of the article, seemed particularly helpful to Craig as it modeled for him the appropriate use of phrasing and intonation for each expository passage he would be reading, and also helped to further establish context prior to reading which I felt was helpful for turning on the sense-making strategy I wanted to see Craig develop.

Reading Strategies:

My concern that Craig was not listening to himself read continued to grow in the early days of the intervention. On the third day, I recorded Craig's reading of the selection, Izzy and Moe (*Crime and*

Punishment, Billings & Billings, 2001). The next day, I had him listen to the tape and see if he could follow along in the text and put a pencil mark beside the errors. A section from my field notes illustrates the successes and difficulties associated with this activity:

16 June 2003

- Craig was able to spot some of his errors and mark them on the copy of the text as he read (he placed a dot quickly above each word). I had wondered if he would be able to keep up with the marking while listening.
- Out of the twenty-three miscues (not including punctuation errors) made in the section edited, he caught four: one was a nonsense substitution, *to* for *that*; the other three were content words: *bozie* for *booze*, *legal* for *illegal* (which he had actually self-corrected while reading), and *pint* (short *i* sound) for *pint*.
- This was difficult for Craig. He did not enjoy hearing himself on tape and said so, but he also found it very difficult to keep up with the speed at which he had read.
- I probably won't do this again as I don't want to contribute to any negative feelings Craig has about reading, but I wonder if it has been useful in helping him see what can happen when he tries to speed through the text
- I did mention to him that reading too quickly could be causing him some of his difficulty with understanding what he is reading. He agreed this might be the case.

Two sessions later, I noted that he was beginning to independently slow his reading down. With some exceptions along the way, this continued to be more and more common. With many ups and downs along the way, Craig slowly eliminated nonsense reading from his expository text reading, though it continued until the end of the tutorials to be somewhat problematic in his narrative reading. I even noticed for the first time, about halfway through the tutorials, that Craig was beginning to run his finger underneath the text when the reading became difficult, often in conjunction with re-reading the difficult portion. While this was an infrequent habit, and not a strategy I wanted to see him use with 100% of his reading, it did signal that he was actively taking measures to slow down, focus carefully on difficult sections and that he was closely listening to himself as he read. By the end of the intervention, I noted that when long and difficult sentences were present in the reading, he would efficiently decode each difficult word, and then go back and put the whole sentence together in a fluent manner. My field notes illustrate the first time I noted this triumph:

21 October 2003

- Craig was listening beautifully to himself and self-correcting consistently.
- Also –this may be a first– he came upon a very difficult sentence:

The planes carry radar, sophisticated computers, and weather instruments that determine characteristics such as temperature, air pressure, wind speed, and wind direction inside the hurricane.

- He had to slow down to read the first five words, decoding *sophisticated* syllabically. In the past he would have just carried on, today he went back to the beginning of the sentence, read the five words fluently, and carried on: An excellent strategy for difficult, long sentences especially for him where working memory for holding strings of words may be underdeveloped. ☺

In the beginning my active instruction with regard to strategy training was in the area of self-monitoring. To this end I reminded Craig prior to reading each day that everything he read had to make sense and if it didn't he should go back and re-read, and also to remind him to use every fullstop as it appeared in the text. Additionally, I wanted to begin building knowledge activation strategies which I felt would also help with self-monitoring. I directed him to use the title, pictures (if any), captions, and the first paragraph to try to predict what the passage would be about. We would then talk after his reading and evaluate the prediction. To encourage a basic summarization strategy, I would have him try to identify the main idea of the passage after reading. After approximately 15 sessions I began asking Craig to articulate what he could do to help his reading, prior to reading the expository text. At first he articulated the word identification and comprehension strategies I had been promoting. By the end of the intervention his self-generated list of strategies grew to include:

1. Predict what the passage is going to be about by using the title, pictures (if there are any), and the first paragraph
2. Listen to myself to be sure I'm making sense.
3. Read the sentence again if it doesn't make sense.
4. Stop for all periods.
5. Use the syllables to figure out long words.
6. Look for root words in longer words, but don't forget to read the prefix or the suffix.
7. Don't read too fast
8. When I am finished reading, ask myself what the main idea was.

Not wanting the task of articulating the strategies to become mundane for Craig, but recognizing that he needed daily to articulate the strategies, I typed them up using a large font and glued them onto index cards. We then used the cards in various ways prior to reading. Sometimes he would recite a strategy and I would find the card and lay it on the table, sometimes we would switch roles. Later on we

began sorting the strategies according to pre-reading, during reading and post-reading categories. We also sorted them for their utility in expository text reading and narrative text. In this way I wanted Craig to reflect on strategy use, and develop a flexible approach to employing the foundational strategies he was mastering.

Attitude toward Reading:

In the beginning Craig seemed to be attending the reading tutorials predominantly to meet his parents' interest in having him involved and because he knew that he wanted to improve his reading. It was not always easy though for him to attend the reading tutorials. On one particular day early in the intervention, the following scenario took place:

19 June 2003:

- Craig came dashing in, having left his friends who were building a mountain bike trail in back of his house. It was obvious he really did not want to be inside reading. He didn't say anything, except "Okay, let's get this done."
- His reading was rushed and he did say he was in a hurry to get back outside.

Craig's early motivation to attend was mostly extrinsic, his parents wanted to come and he had made a commitment to attend, with a modicum of intrinsic motivation to become a better reader. Toward the end of the intervention, it appeared that Craig was beginning to see the benefits of the time he was putting into reading. The following account illustrates this:

1 October 2003

- Craig came late today apologizing that he had a bit of homework he had to finish. I asked him about it and he said it was a reading passage that he had to read and make inferences with. I asked him if he now found those kinds of questions easier to answer (his mother had noted at the beginning of the study that these were generally the types of comprehension questions that Craig had difficulty with) or if he noticed any difference this year. He emphatically stated: "Oh yeah! Way easier!" When I asked him why he said it was because he was a better reader! ☺

For the first time, I was hearing him make positive statements about himself as a reader, and attributing his success at school to his improved reading ability. It seemed that his commitment had paid off, reading success was growing, as I hoped was the beginning of some intrinsic motivation to read.

Due to Craig's preference for expository text, he did not appear to be put off by the three readings each of the National Geographic passages received with the repeated reading method.

Results of Final Assessment

Informal Interest Inventory: Post-Intervention and **Parental Interview: Post-Intervention:** (See Appendices G and H for these instruments)

Attitude toward Reading:

When asked if he liked to read in this final inventory, Craig enthusiastically replied, "I like it!" Elaborating on this, he explained, "I can read faster. We read for twenty minutes a day at school and that's going better now." Regarding reading aloud for his parents, Craig was also positive, "I feel good about it now because I can actually read without them getting mad! They don't actually get mad, but they stop me and correct me and I hate it when they stop me." Craig's mother was a little more cautious in her observations regarding his attitude toward reading, "His positive attitude comes and goes. Some days he is fine, he really gets into the book and wants to read more than we had planned. Other days, we have a lot of "discussion" about it before he finally settles down to read. Part of the problem is that we are reading at night: that's when we have time. But he is tired some nights and since reading is still work for him, tiredness makes it harder." Another part of the problem, Craig's mother noted, was that he had never particularly liked narrative fiction, "He is much more interested in fact and so he is more invested while he is reading it. His grandfather was very much that way: he never read novels but read several newspapers a day." But she was concerned that next year when he starts Secondary School, he would have to read assigned novels for English class, and thus she wanted him to gain some experience with it now, rather than only reading the expository genre he preferred.

What is very interesting with this is that when asked what he enjoyed about the tutorials, Craig's first response was that he had enjoyed reading *Crash*, the novel we had read together over the last several weeks of the intervention. (The protagonist was a middle school athlete with whom Craig could identify, and whose sardonic approach to life, Craig found amusing.) However, in the next breath, he did state that he found the magazines much easier to read.

Craig was somewhat cautious when asked if he felt he was a good reader. "I am an okay reader. There's bad, okay, and good. I'm in the middle." When asked who he knew that was a good reader, he named a girl in his class, and stated "that she never gets anything wrong when the class does pop reading." When asked what she might do if she came upon something she didn't know, Craig replied, "I think she goes by the syllables," naming one of the word attack skills he had listed in his own repertoire. In other words, he is equating his reading behaviour with that of a skilled reader.

Reading Skills:

When asked for examples of ways in which his reading had improved, Craig stated, "I can read now ... without going too fast and skipping words. I can get the big words now. My comprehension is better." Craig's mother added to this, "His fluency has definitely improved. He reads whole sentences now and is not just reading individual words. He's paying attention to commas, periods, and sentences and uses inflection where he never did before. [However,] his fluency is much better with factual reading than with narrative reading." Regarding comprehension, she stated, "It has definitely increased. I think it's because the sentences are now making sense." This has had a positive effect on Craig's homework. His mother explained: "We have far fewer battles around homework now. He is able to correctly read the instructions now and because he is getting the idea of what he is being asked to do, the homework is easier. When he was just reading the words, he couldn't make overall sense of things. Now he is able to read the "thought" behind the instructions and questions." Asked what she felt was particularly helpful about the tutorial sessions, Craig's mother replied, "Whatever it was that you did to get him to read in sentences instead of word-by-word. Also, getting him to pay attention to the periods has been great. That is something we could never get him to do."

Craig's mother noted other positive changes in his literacy skills, she felt resulted from his improved fluency: "I also notice his sentence writing is better. He is writing complete and meaningful sentences where he couldn't before." But along with the fact that narrative reading continued to be hard work for Craig, she noted that spelling is still difficult for him.

Asked what he did when he came upon something he doesn't know in his reading, Craig stated, "I either go back to the beginning of the sentence or the beginning of the paragraph or I go by the syllables in the word." He also felt that using the syllables was a method a teacher would have a student use to decode unknown words. He said that he didn't particularly enjoy the writing involved with the prefix and suffix work we did, but was quick to add, "Maybe it did help with my reading. When I looked for the additions it was easier to pronounce words." Craig's mother said that she really hadn't seen him need to decode at home because the books they were having him read at home, were books he could easily handle, and couldn't comment on whether he was applying expanded decoding skills at home.

Reading Strategies:

Craig was able to list the following strategies he used when reading, "I read not that fast. I read and predict what it will be about. At the end of the story I see what the main idea was to remember what it was about." When I asked what he felt had been personally helpful to him in the tutorial sessions he launched into a listing of skills and strategies we had worked on, "Stop at periods. Don't read too fast. At the end of the passage, think of the main idea so you can remember." This seemed to indicate that he found the strategy training for self-monitoring, knowledge activation and summarization to be helpful. Craig's mother made the following observation with regard to Craig's use of self-corrective strategies: "He still rushes when reading narrative books and would not self-correct mistakes if he could get away with it because he is often trying just to get finished. But when we stop and tell him he has not made sense, he knows exactly where he went wrong and is able to fix it immediately. This never happened before – before when we would stop him, he would just repeat the mistake when he re-read."

Silvaroli's Informal Reading Inventory: Posttest: At the conclusion of the intervention, Craig's reading assessment found his Independent level of reading at the sixth grade level, for non-contextual and contextual word identification. His non-contextual word reading using the graded word lists began to lose fluency at the fifth grade level, but he was able to accurately read most of the words right up through the

eighth grade list. Craig's comprehension was found to be at the sixth grade level, for both the subskills and the reader response format. He displayed only one instance at the sixth grade level, subskills format, of adding fullstops to simplify a difficult sentence, and the word substitutions he did make at this level were considered insignificant as they did not change the meaning of the text and were minimal in number.

An interesting example of his employment of sense-making as a strategy for cuing self-correction occurred:

Text: The only way a beaver can get into the house is to submerge and enter through an opening in the flooded room.

Substitution: *The only way a beaver can get into the home is to submerge the entire.... [self-corrects] and enter through an opening in the flooded room.*

Though he missed the substitution of */home/* for house (and may have deliberately decided it was close enough), he did recognize when he reached the word *through* that his substitution of */the entire/* was not syntactically correct, and so re-read that portion. Additionally, he did not revert to his previous habit of adding fullstops to shorten long and complicated sentences, but employed a re-reading strategy instead. However, on the sixth grade reader response format which employed a narrative voice, Craig's comprehension of this passage was strong, but his reading displayed a disconnect of self-monitoring, as exemplified below:

Text: Not for a moment, during the half hour I spied upon them, did they stop their teamwork.

Substitution: Not the moment, during the half hour I sped upon them, did they stop their teamwork.

Unfortunately, though the seventh grade, subskills format, passage provided more difficulty for Craig, he did not adjust his reading speed to enable himself to handle its demands, but read at the same pace as he had for the sixth grade passage.

Clay's Letter Identification task: (See Appendix D) Craig read the names of the letters of the alphabet with 100% accuracy, and 98% accuracy when using the letter sounds. The sound for */u/* continued to be difficult for him to retrieve.

Knowledge of common consonant clusters and digraphs and special vowel combinations:

(Appendix D) Craig's accuracy rate for the consonant clusters and digraphs was 76%. He did not read the consonant blends /sll/ /grl/ /brl/ /prl/ /sprl/ /drl/ /strl/ in their blended form, separating the sounds instead. (It should be noted that he did not display difficulty with these in his regular connected text reading.) He was 100% accurate with the common vowel combinations.

Yopp-Singer test of phonemic awareness: (See Appendix D) Craig was able to identify all of the rhyming pairs accurately, and with the exception of one pair (store-more), automatically. In the blending task, he blended /c-ut/ to form /cat/. On the segmenting task, for the two he incorrectly segmented, he added extra vowel sounds, for /is/ supplying /i-is/ and for /boy/ supplying /b-o-oy/.

Table 12
Craig's Posttest Summary

	Posttest
Phonological and phonemic Awareness	
Rhyme Detection	100% 1 rhyming pair not automatically recognized
Blending	97% Difficulty discriminating medial short /u/
Segmenting	91%
Letter Identification	
Names	100%
Sounds	98% Problematic sound: /w/
Common Vowel Combinations	100%
Consonant Cluster and Digraphs	76% -r clusters problematic
Independent Reading Level	
Word Recognition (non-contextual)	Grade 6
Word Recognition (contextual)	Grade 6
Comprehension	Grade 6
Reading Speed (at Independent reading level)	95 wpm

Table 13
 Posttest Tracking of Craig's Reading Skills

	Posttest: Grade 6 Level (Independent Level)	Posttest: Grade 7 Level (Instructional Level)
Word Count	110 words	126 words
Time	1.16 minutes	1.33 minutes
Words per minute	95 wpm	95 wpm
% Miscues* (self-corrected and uncorrected)	7.3%	7.1%
% Substitutions	2.7%	4.0%
% Nonsense Substitutions	0%	2.0%
% Omitted Words	0%	0%
# Additional Words	2	1
% Ignored Full-stops	0%	0%
# Added Full-stops	1	0
Comprehension Accuracy	100%	50%

Discussion

Results from all of the Instruments employed in the study (Quantitative: Silvaroli's Informal Reading Inventory; Clay's Letter Recognition task; Recognition of Common Consonant Clusters and Digraphs, and Vowel Combinations; and The Yopp-Singer Test of Phonemic Awareness, each administered in the pretest/posttest manner; and Qualitative: Informal Interest Inventory; and Parental Interview, both administered in the pretest/posttest manner, along with observations made in my field notes and modified miscue analysis of running records kept at intervals throughout the intervention) have been combined under the categories of reading skills, reading strategies and attitudes toward reading to develop an overall picture of Craig's reading outcomes as influenced by the methods employed in the study.

Reading Skills:

Over the course of fifty tutorial sessions, or twenty-five hours of instruction (three hours of which were devoted to assessment), Craig's Independent reading level moved from the third grade to the sixth grade level for automatic, non-contextual word recognition. For contextual word recognition and comprehension, Craig moved from the fourth/fifth grade level to the sixth grade level. From the early days of the study Craig appeared to be able to decode accurately when he took enough time to look carefully at the text. Decoding skills appeared to be in place, but he was not using them. Craig appeared to be stuck in a logographic phase of automatic word reading where he was making substitutions which bore similarity to the consonant framework of the words in question. It became apparent over the duration of the intervention, that this was being driven by two factors: limited experience or practice with text had resulted in poor automaticity with sight vocabulary; and poor working memory provided Craig with difficulty comprehending long and/or complex sentences. These two factors combined to produce reading which frequently varied from the printed text, with the miscues on content words generally not making sense beyond the lexical level. By the end of the study it was clear that Craig, especially when engaged with the text, was applying a semantic standard (Baker, 1985, cited in Alexander, et al., 1998) of comprehension as he processed the text. When combined with increased automaticity with a greater number of words and increased ability to hold longer strings of words in working memory, provided through increased daily oral reading, this resulted in much more accurate reading of expository text.

Craig's phonological awareness also showed improvement over the course of the intervention. He displayed great difficulty with the rhyming task in the pretest, with an 80% accuracy rate, and no automatic recognition of rhyming pairs. At the conclusion of the intervention he was able to recognize 100% of the rhyming pairs and displayed automatic recognition of all but one of the pairs (5%). Phonemic awareness did not show as much improvement: blending of sounds to produce words showed marginal improvement, and segmenting of sounds showed marginal regression. In both the blending and segmenting, it appeared to be the short vowel sounds for /u/ and /a/ in the medial position of CVC words which gave him difficulty.

Ability to produce the sounds for isolated letters grew over the course of the intervention from 91% accuracy to 98%. Interestingly, it was the short /u/ sound which gave him difficulty in the blending and segmenting posttest task which he had been unable to produce in the letter/sound recognition pretest task. From this it would appear that Craig still has some difficulty with the minute aspects of the graphophonemic system, specifically the sounds for /u/ and /w/.

Reading Strategies:

Craig originally had stated that when he came upon a difficult word, one of his strategies was to omit the word. I did not note, however, that he employed this strategy with content words, which were the most likely to be unknown to him, but instead observed he omitted numerous function words (basic sight vocabulary) which he easily recognized in isolation. This was noted in the pretest, but over the course of the intervention, diminished in his expository text reading, and resulted in a posttest word omission rate of 0% for both his Independent and Instructional level. When this is viewed alongside the fact that his rate of addition of fullstops dropped from the pretest to the posttest and notably improved in his engaged expository text reading over the course of the intervention, it demonstrates that Craig moved beyond the ineffective strategy he earlier used of shortening sentences to accommodate them in his working memory.

Craig also has shown growth in his ability to take control of the reading process, by adjusting his reading speed when reading becomes difficult. In the pretest, when the reading became more difficult, instead of slowing his reading down and re-reading difficult portions, Craig actually increased his reading speed. While the posttest showed that his reading speed was essentially the same for his Independent and Instructional level, he nonetheless did not revert to his former accelerated pace for difficult text. This trend was noted throughout the intervention as Craig increasingly began re-reading phrases or sentences which did not make sense, and occasionally running his finger under the text when it was particularly difficult. It was also a strategy which he named in the posttest Informal Interest Inventory as one which he employs when the reading gets difficult. As such, self-monitoring appears to be a strategy he is beginning to employ, but will need assistance to bring him to the point of using it automatically.

Over the course of the study, Craig's increasing application of a self-monitoring strategy to his oral reading seemed to move him to more consistently apply a semantic standard for evaluating his comprehension as he processed text. This had the effect of dramatically increasing his accuracy and, I feel, was one of the factors that increased his capacity for holding longer strings of words in his working memory. Thus we see a gain in his comprehension, from 80% pretest accuracy rate at the fifth grade level, to 100% accuracy at his new sixth grade Independent level. (See Holistic View of Craig as a Reader below for more on this.)

The following tables contain a comparison of Craig's pretest and posttest results:

Table 14
Pretest / Posttest Comparison

	Pretest Level	Posttest Level
Phonological and Phonemic Awareness		
Rhyme Detection	80% No automatic recognition of rhymes	100% 1 rhyming pair not automatically recognized
Blending	93% Difficulty discriminating medial short /a/ and /u/	97% Difficulty discriminating medial short /u/
Segmenting	100%	91%
Letter Identification		
Names	100%	100%
Sounds	91% Problematic sounds: /U/ /G/ /J/ /W/ /w/	98% Problematic sound: /w/
Common Vowel Combinations	100%	100%
Consonant Cluster and Digraphs	55% -r, -m, -w clusters problematic	76% -r clusters problematic
Independent Reading Level		
Word Recognition (non-contextual)	Grade 3	Grade 6
Word Recognition (contextual)	Grade 5	Grade 6
Comprehension	Grade 5/6	Grade 6
Reading Speed (at Independent reading level)	93 wpm	95 wpm

Table15
Pretest/ Posttest Tracking of Craig's Reading Skills

	Pretest: Grade 5 Level* (Instructional/ Independent)	Pretest: Grade 6 Level (Frustration)	Posttest: Grade 6 Level (Independent Level)	Posttest: Grade 7 Level (Instructional Level)
Word Count	116 words	174 words	110 words	126 words
Time	1.25 minutes	1.33 minutes	1.16 minutes	1.33 minutes
Words per minute	93wpm	134wpm	95 wpm	95 wpm
% Miscues* (self-corrected and uncorrected)	6.0%	10.9%	7.3%	7.1%
% Substitutions	3.4%	6.3%	2.7%	4.0%
% Nonsense Substitutions	0%	0%	0%	2.0%
% Omitted Words	2.6%	4.6%	0%	0%
# Additional Words	0	1	2	1
% Ignored Full-stops	0%	0%	0%	0%
# Added Full-stops	0	3	1	0
Comprehension Accuracy	80%	80%	100%	50%

*I had misinterpreted Craig's score on the Graded word lists, erroneously thinking they indicated testing should begin at the grade 5 level. His reading of the grade 5 passage reflects this error on my part: indicating that grade 5 was somewhere between his Instructional and Independent level, and his reading of the grade 6 passage indicated this was his Frustration level. Unfortunately, evaluation was not done on the grade 4 level passage, which in retrospect appears to have been his Independent level

Attitude toward Reading:

Craig's attitude toward reading showed a strong positive shift over the course of the intervention. While he did not begin the study with any particular resistance toward expository text, which was the main focus of the study, his main attitudinal shift with this type of text seemed to revolve around his own perception of his ability to handle it. Craig noted that he is now able to "get the big words" and his comprehension was improved. This word focus and the idea that good readers "never get anything wrong" worried me a little in that my goal had not been to portray accuracy of word reading as paramount, and I had actively worked to make it a very minor part of each tutorial. I realized, however, that to Craig this was a highly positive accomplishment. He now had control over the reading process in a way he had never

experienced: not only did he now possess a wider repertoire of strategies to guide his reading and to help himself if he was stuck, he was also "getting" the words, just like the good readers in his class. The dual evidence he offered to substantiate his sense that he had become a better reader: ability to read difficult words and improved comprehension, seem to support the conclusion that his excitement regarding his newfound accuracy is a positive step. For the future, though, those working with Craig will have to be careful not to stress perfect word recognition above comprehension and enjoyment of text.

Equally, exciting was his shift from the pre-intervention feeling that "reading aloud sucks" to his post-intervention statement: "I feel good about it now." Supporting this final statement was Craig's nonchalance when speaking of the "pop reading" (better known as round robin or popcorn reading) practice employed by some of his seventh grade teachers.

As Craig shifted from his previous conception of himself as a "bad reader" to his new conception of himself as an "okay reader" his sense of self-efficacy grew. He was seeing that his improved reading skills and strategies were having direct benefits on his school work, not only making it easier, but yielding higher grades at school. His new goal for himself: to read every night, reflects his knowledge that his reading success is directly affected by his own personal effort. This has highly positive implications for Craig's future as a learner, as he sees himself as one who is able to take strategic measures to improve his learning.

In addition to "reading more," Craig had given, "Get into books I don't like...like novels," as a goal for his reading development at the outset of the study. His narrative text reading did not show tremendous growth (and was not actually measured) throughout the study, though I did note that he was using more expression and attending to the prosodic features of the text in this type of reading. It was Craig who said he found novels easier to read as a result of the intervention and that the narrative text reading he now had to complete at school was "going better."

Craig adopted what I felt was a very mature attitude toward the reading tutorials. There were many times in the beginning when there were other activities he preferred to be involved in and often had

to tear himself away from in order to be on time for his tutorial session. It was not always easy for him, and yet he came day after day. Displaying a self-awareness which recognized that he would have difficulty attitudinally if the tutorials fell in the middle of other activities in which he was engaged, he strategically chose to have his tutorials first thing in the morning during the summer and early in the morning, well before school started, during the time in which the tutorials overlapped with the beginning of the school year. His parents report that he did not complain at all about these early mornings or regret the choice, displays the strong resolve on Craig's part to actively take control of his learning. This is an attitude which will serve him well for the future. To some degree he may always experience difficulty with phonological processing, but the growing sense of self-awareness around his needs and abilities will serve him well in compensating.

The following three diagrams display the outcomes of the study in relation to the methods used:

Figure 8
Relationship Between Method and Outcomes

Reading Skills - Craig

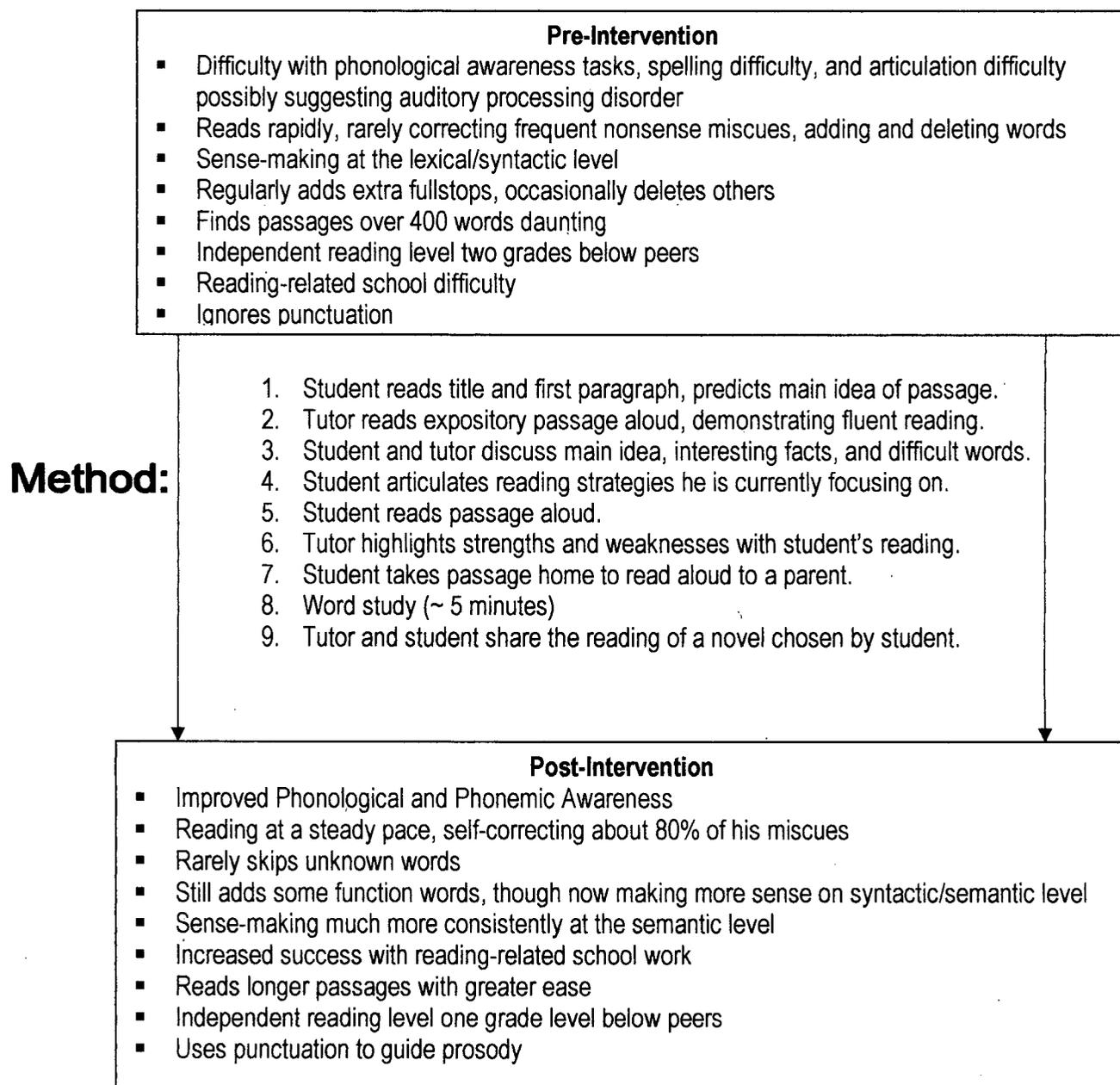


Figure 9
Relationship Between Method and Outcomes

Reading Strategies - Craig

Pre-Intervention

Articulated by Craig:

- Skip the word
- Context cues (read on and try to think of a word that makes sense)
- Ask for help

Observed:

- Inserts a word which is visually similar (i.e. same initial and final letter/sound or same consonant framework)
- Manipulate sentences through addition or deletion of fullstops

1. Students state prediction of main idea prior to reading using title, pictures, first paragraph.
2. Pre-reading reminders to slow the reading down, stop for all fullstops, and really listen to self reading to ensure sense making
3. On photocopied pages, approximately one day in four, fullstops highlighted in red by student as a visual prompt before reading
4. After reading, miscues read to students in context of sentence, student attempts aurally and visually identify miscue, then re-reads sentence correctly.
5. When difficult words encountered in 4, student instructed to break word into syllables or familiar words
6. After reading, brief summary of passage stated by student
7. Word analysis to draw students' attention to details of words

Post-Intervention

Articulated by Craig:

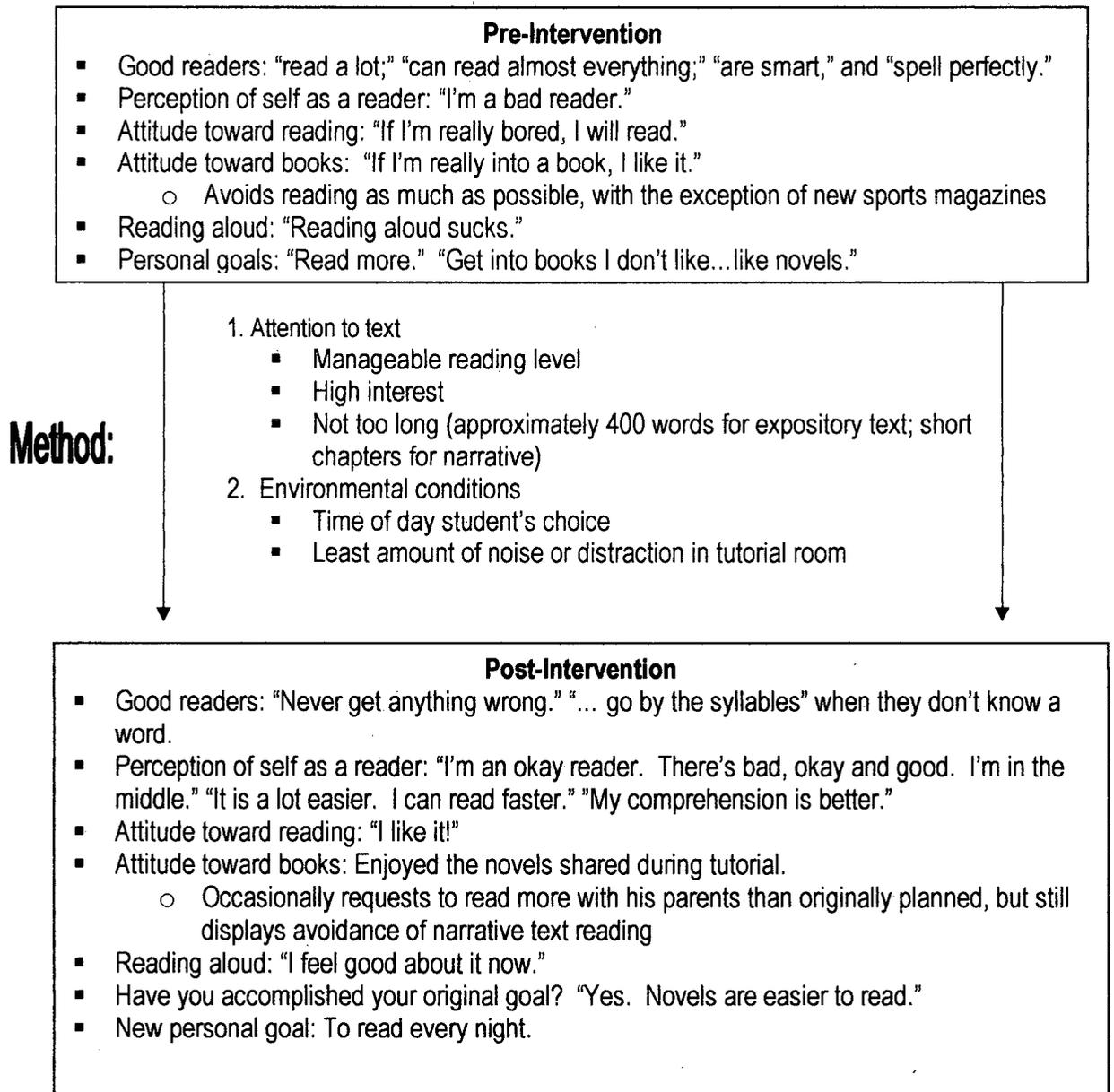
- Use the syllables to decode unknown words
- "When I look for "add-ons" it is easier to pronounce words." (referring to root words, prefixes, suffixes)
- Don't read too fast
- Re-read the sentence or the paragraph when it is not making sense
- Read the title and predict what the passage will be about
- At the end of the passage, see what the main idea was to try to remember what it was about

Observed:

- Not consistently self-correcting, but doing so much more frequently and with ability to accurately correct when prompted (better with expository text than narrative).
- Employs re-reading when meaning breaks down far more often
- Actively slows down when reading becomes difficult
- Spontaneously discusses passage content when finished reading

Figure 10
Relationship Between Method and Outcomes

Attitudes toward Reading - Craig



Combined Observations Regarding Reading Skills, Strategies and Attitude toward Reading:

Throughout the intervention I noted occasion after occasion where Craig's reading skills and strategy use, and even his attitude toward reading, had been steadily showing improvement and then would suddenly show sharp regression. At first I hypothesized that he simply had not consolidated the new skills and strategies he was gaining. This may well have been part of the explanation. However, I also began to note that Craig is extremely sensitive to outside, environmental factors, such as hearing his friends outside or working in a noisy environment, and that these regressions often occurred when a quiet learning environment was not in place. This will be important information for Craig to be aware of for the future as he structures his own learning environment. Difficulty filtering out external noise, or as it is commonly referred to, "cocktail party syndrome," is known to be common among those who experience phonological processing difficulty (see Mann, 1998).

Additionally, it became apparent over time that Craig's reading was far better when authentic texts were used as compared to texts which were commercially prepared for fluency training. I had noted early on that the content of these fluency passages, though leveled at the grade 4 level, was of a nature which was not within Craig's realm of pre-adolescent experience. Though I had attempted to select passages which would be topically interesting to Craig, the subject matter was far more adult in nature, and thus un-engaging. The commercially prepared passages had the effect of dimming Craig's sense-making strategies, even at a point in time when it had become apparent that he had made great strides in this area. (See Appendix J-1 and J-2 for full running records of these texts) This is reflected in a number of aspects of his reading (chart follows). His reading speed with the commercial fluency text was much faster, harking back to his early days with the tutorials where he raced through the text simply to get it done, rather than adjusting his reading speed according to the text difficulty. His substitution rate was lower for the authentic text and he made few, if any, nonsense substitutions with the authentic text. He did not omit any words with the authentic text and did not add any fullstops. Finally, Craig employed more re-reading of words/phrases for clarification purposes with the authentic text than he did with the commercial fluency

text: the ratio of 12:10 is more significant when it is noted that the commercial fluency text is approximately one-third longer than the authentic text. Listening to himself read and re-reading when meaning breaks down was a strategy I had long been working on with Craig; thus, increased re-reading behaviour on the initial reading of a passage was a positive sign. While quantitatively these differences may not appear to be extraordinary, they do reflect the general sense that I had throughout the study that Craig's reading was vastly improved when he was engaged with what he was reading. The fact that the authentic text is visually more satisfying in that it is accompanied by photographs, while the commercially prepared text is not, no doubt helped on the motivational front. What is very interesting in this argument is that the commercially prepared text is reported by the publisher as leveled at the fourth grade reading level, while the authentic text is given a Lexile ranking of 850 (see Appendix K) by its publishers which places it at a sixth grade reading level. Thus, the engaging text which is actually more difficult in terms of vocabulary and sentence length and complexity, is actually that which Craig reads with greater accuracy.

Table 16
Comparison of Reading between authentic text and commercially prepared fluency passage

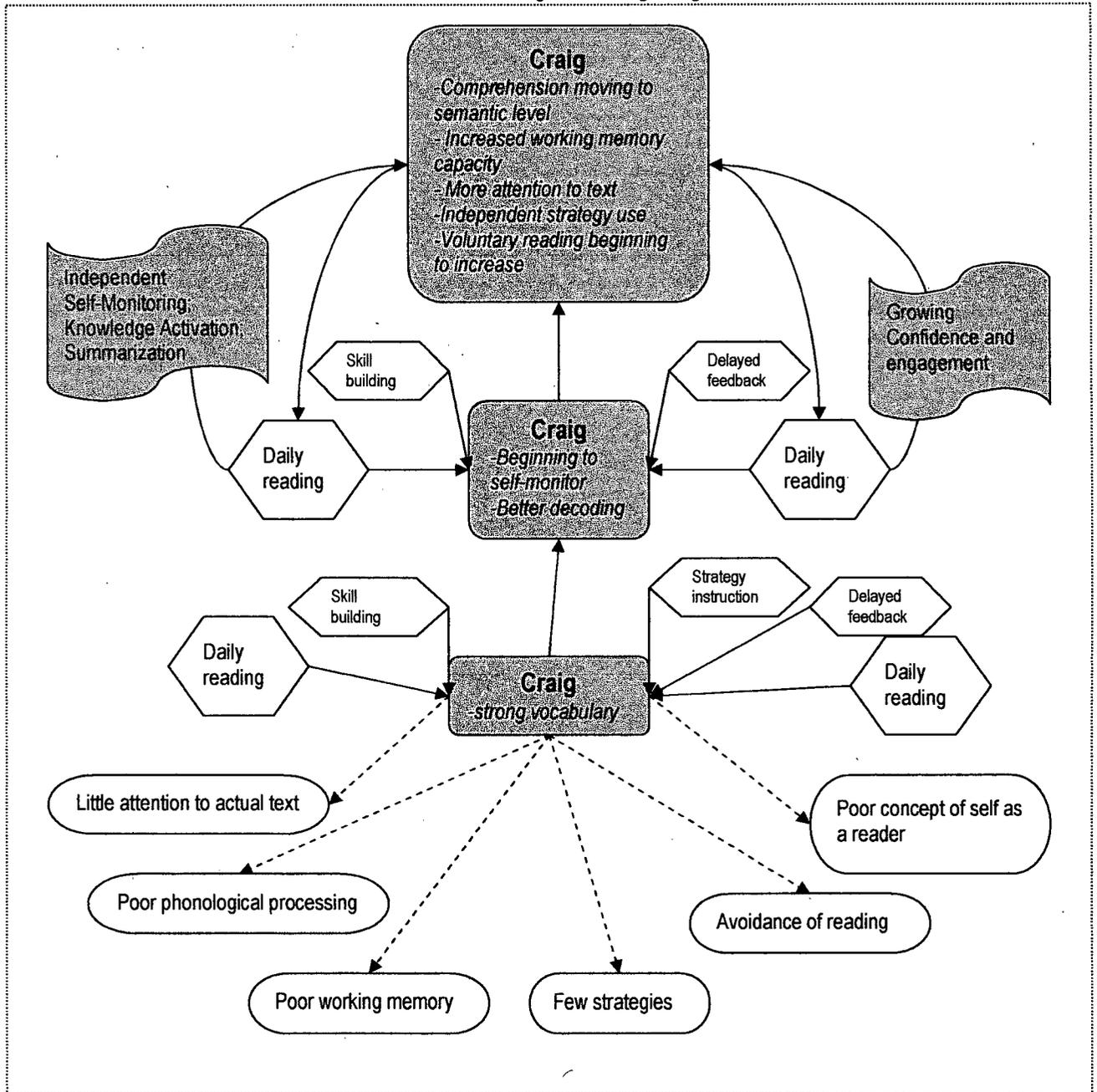
	Oct 6	Oct 8
	Authentic Text	Commercial Fluency Text
Word Count	257	402
Time	3:00	3:20
Words per minute	86wpm	122wpm
% Miscues* (self-corrected and uncorrected)	3.9%	5.5%
% Substitutions	1.5%	2.5%
% Nonsense Substitutions	0%	20%
% Omissions	0%	1.0%
# Additions	2	2
% Ignored Full-stops	0%	0%
# Added Full-stops	0	1
Re-reading behaviour	Re-reading behaviour: 12 instances	Re-reading behaviour: 8 instances
Comprehension Accuracy	Not measured	90%
Level of Text	Grade 6	Grade 4

* This category includes all miscues: substitutions, omissions, and additions, but does not include re-reading a word or phrase initially read correctly.

A Holistic Picture of Craig's Reading Progress

Craig began the tutorial sessions with a strong receptive vocabulary, but with a number of features which in essence drained his capacity as a reader. In particular, he used few strategies in his reading, he gave little close attention to the text as it was actually printed, he held a poor concept of himself as a reader and he actively avoided reading. In addition to this, he appeared to present with poor phonological processing ability, and seemed to be comprehending text predominantly at the lexical level. His ability to self-monitor for comprehension at the syntactic/semantic level was impeded by long sentences, suggesting a poor working memory. As automaticity increased through the experience with daily reading (expository and narrative) with minor amounts of skill instruction (encompassed by: word analysis instruction and attention to prosodic features; and delayed feedback to highlight strengths and help Craig identify errors), Craig's attentional reserves were then released to begin processing longer strings of words. This comprehension at the phrasal level led to increased overall comprehension and allowed him to apply more attention to independently monitoring his own reading. This independent monitoring in a sense began a feedback loop which not only allowed for increased automaticity, more attention to the text, increasingly efficient decoding, and expanded working memory, but also allowed for more reading volume to which he could also apply increased independent monitoring. Once independent monitoring began to be established the other strategies in which he was being trained, knowledge activation and summarization could effectively be employed and formed an integral part of this same feedback loop. It appears as well, that his phonological processing ability was positively impacted through the oral reading. Simultaneously, as his skills and strategies were increasingly becoming automatic and coordinated, his confidence in himself as a reader and his engagement with the text began to grow. This set up another feedback loop which encouraged more reading, more opportunity for confidence and engagement to grow, and impacted on his skill and strategy use. The following flowchart illustrates this process:

Figure 11
A Holistic Picture of Craig's Reading Progress



Joel and Craig and the Intervention A Cross-case Analysis

This case study began with two boys who shared many similarities. They were both the same age: at the outset of the study, just completing the sixth grade; starting the seventh grade at the conclusion of the study. Both lived with their families in the same city, on the same street, and went to the same school. The boys had been lifelong friends. They shared many of the same recreational interests and spent a great deal of time together. Both boys and their families shared aspirations toward professional careers which involved post-secondary education at the university level: aspirations which would require them to be proficient readers. And both boys experienced reading-related school difficulty.

By the time they joined the study, both boys were reading a little more than two years below grade level. Preliminary conclusions from the initial assessment showed that both boys demonstrated difficulty with several aspects of reading fluency: rate, accuracy, automaticity with sight vocabulary, phrasing and expression (Worthy, Broaddus and Ivey, 2001). Both boys had a history of avoiding reading: to the point where they spent almost no time reading, outside of school work, unless required to do so by their parents. From a bottom-up perspective on reading, it would appear that both boys were caught in the cycle described by Stanovich's Matthew Effects where failure to master early reading processes led them to find reading difficult, which in turn led them to avoid reading. Avoidance of reading meant they failed to gain the experience necessary to master the skills which would make reading easier, while at the same time their peers were reading more and more, becoming increasingly more fluent readers. As school expectations increased year by year, the gap between their reading and their peers' reading widened, to the point that in the upper elementary years of their schooling, their teachers were voicing concern.

From a top-down perspective, both boys had a poor concept of themselves as readers at the outset of the study, perceiving themselves to be poor readers in relation to their peers and the significant adults in their lives. Perceived efficacy is viewed as one of the strongest predictors of reading

achievement (see Wigfield and Guthrie, 1997). A poor sense of self-efficacy in reading may well have contributed to their limited use of reading strategies as conceptualized by Butler (1998a). Additionally, lack of motivation to read directly impacted the amount of reading the boys were engaging in. Wigfield & Guthrie's (1997) finding regarding motivation and amount of reading in which children participate speaks to this: "it does not appear that children become frequent readers and then become motivated to read. Rather, children who report they are motivated to read tend to increase their reading in the present and the future (p.424)." From this perspective, it was unlikely that the increased reading Joel and Craig needed to participate in to improve their reading would take place given their lack of motivation.

There appears to exist a "chicken and egg" type of phenomenon between top-down and bottom-up perspectives on the origins of the cyclical reading difficulties such as Craig and Joel were experiencing. Wigfield & Guthrie (1997) capture the nature of the difficulty:

Because amount of reading correlates with reading achievement (e. g. , Anderson et al. , 1988; Cipielewski & Stanovich, 1992; Cunningham & Stanovich, 1991 [cited in Wigfield & Guthrie, 1997]), it is possible that motivation is a consequence of reading achievement. Alternatively, it also is possible that the correlation of amount of reading and achievement documented by other investigators is mediated by reading motivation. The three variables of reading amount, achievement, and motivation need to be measured simultaneously to permit an examination of these alternatives. This issue awaits future research.

(p.424)

It seems safest to say that in the reading behaviour of both boys, difficulties at the bottom-up skill level and top-down motivational level were at work simultaneously, effectively preventing them from engaging in reading activity beyond what was required in the classroom. Poor skills and lack of motivation were having the effect of separating the boys from text and may have been preventing them from reading strategically.

As may be noted through the difference in length of the case reports, Joel's reading difficulty was more straightforward in many ways than Craig's. Joel's poor automaticity with sight vocabulary may in part be explained by his avoidance of reading. However, at the beginning of the study he had recently found an author he enjoyed, who wrote at a level he could manage, and thus was actually beginning to do more extended reading of narrative text during his classroom daily sustained silent reading period, though this

had not extended to home reading. Expository text, however, continued to be a problem for Joel. Structure of the expository text genre was not the only challenge he had to overcome: poor decoding skills meant that he had few resources for tackling unknown words. Because expository text used for learning purposes in schools so frequently introduces new vocabulary, Joel's lack of automaticity with grade-level sight vocabulary coupled with poor decoding skills meant that he often experienced difficulty extracting meaning from what he read (Samuels & Flor, 1994; Allington, 2002). Additionally, Joel's definition of good reading as synonymous with fast reading meant that he attempted to race through the expository text and failed to heed the punctuation. Having a fairly well-developed self-monitoring strategy, Joel would recognize his comprehension was lacking when he ran sentences together, but often did not seem to realize that it was the failure to heed punctuation which was causing the problem. This frequently resulted in several re-readings of whole paragraphs, and ended with Joel saying he didn't understand. The net result of this was poor engagement with expository text and poor comprehension. It would appear that Joel's reading difficulty fell into the category Pressley (2002) defines as: the poor reading of a child of normal intelligence who is a victim poor instruction or educational neglect (p.73).

For Craig, fluency difficulty with expository text also went beyond poor automatic word recognition. Given that expository text was his preferred text type, engagement had a better likelihood of being in place than with the narrative text for which he expressed such dislike. Craig's decoding skills, when engaged with the text, or when directed to look closely at a word, appeared to be sufficient for accurate reading. However, Craig read at a rapid rate and his reading frequently bore only a semblance of similarity to the actual text, behaviour which worsened as the text difficulty or length increased. His substitutions for content words were generally real words, but often contained only the same consonant framework or contained morphological changes. He also regularly misread function words. While it appeared at first that he was applying little self-monitoring to his reading, as he rarely self-corrected, his utterances did bear some sort of syntactic accuracy and thus it seemed he was substituting function words to help his content word miscues to make sense, at least at the phrasal level. It was his frequent substitution of fullstops

which provided the clue, that along with difficulty with phonological processing, a poor working memory may have been an important factor in Craig's reading difficulty. It appeared that he had developed the coping mechanism, or ineffective strategy, of shortening long and/or complex sentences to compensate for difficulties with holding strings of text in his memory. This difficulty with holding symbolic representations in working memory, along with difficulty with the phonological awareness tasks in the pretest, and a familial history of dyslexia, suggest that he was indeed struggling to some degree with a phonological core deficit.

At the skill level, Joel required some early, though minute work using syllables to decode. Both Joel and Craig received explicit instruction in the first half of the intervention to help them use the punctuation to guide their phrasing and expression (i.e. attention to prosodic features), and it was noted throughout the second half that they consistently and seemingly effortlessly used the punctuation to guide their prosody. Both boys engaged in word analysis work, and in the post-intervention interview named the ability to find root words as helpful to their decoding. Though this skill work was kept to a minimum, heeding Alexander et al.'s (1998) important reminder that this instruction in the linguistic and metalinguistic aspects of reading must be balanced by instruction aimed at student's conceptual understanding, strategic abilities and motivation for learning, this explicit skill instruction nonetheless significantly impacted the participant's ability to handle the demands of expository text which close to their grade level.

For Joel and Craig, foundational strategy instruction was in order. Self-monitoring strategy instruction was embodied in the explicit reminder they were given before reading that everything they read must make sense and that actively listening to themselves read would help with that sense-making. Knowledge activation strategy instruction was encouraged through pre-reading prediction and post-reading evaluation of the prediction. And finally, summarization strategy instruction took the form of helping the boys to identify the main idea of the passage when reading was complete. For both boys, these strategies not only helped improve their accuracy, but improved their comprehension by helping them move beyond lexical and syntactic standards of evaluating their comprehension to the application of the semantic standard necessary for overall text comprehension (Baker, 1985, cited in Alexander et al., 1998; Adams,

1990; Rummelhart, 1994; Shreiber, 1991). Having the boys articulate these strategies, and others which they self-generated, prior to reading was seen as one of the primary vehicles for promoting independent strategy use beyond the period of the study. In a certain sense skill and strategy instruction had some overlap. Having the boys articulate certain skills (such as attending to punctuation) as strategy reminders prior to reading contributed to the growth in their self-monitoring. This is akin to Butler's (1998b) observation that the hallmark of effective self-regulation is the ability to bring automatic processing to conscious awareness when more deliberate processing is called for (p.165). Discussion of the utility of each strategy with different genres of reading is also noted as important for encouraging both boys to flexibly use their new strategies in other settings beyond the study. Reports from their mothers that their grades were showing improvement over the previous year's grades, a few weeks after the study concluded, seemed to indicate that the boys were both beginning to generalize their reading strategies to the classroom setting.

Beyond skill and strategy instruction (which comprised approximately twenty five percent of the tutorial session), the majority of the early work involved daily repeated reading of expository text with a small amount of daily narrative reading. It was the repeated reading which employed: listening previewing, oral reading and re-reading of expository text (for a total of three readings per passage) which provided an important vehicle for both boys to make tremendous gains in all aspects of their reading fluency.

Oral reading seemed particularly helpful to both boys to overcome difficulties with reading beyond the word level. It was as though by hearing themselves read aloud, they were more effectively enabled to employ the prosodic features of the text, which led to phrasal reading, which fostered better comprehension of the text as a whole. I believe that for Craig, the oral reading provided the means for expanding the length of the strings of words he was able to hold in working memory, an area of difficulty which was impeding him from moving to a semantic level of comprehension monitoring. Adams (1990) may offer an explanation for this when she describes the articulatory loop: "By speaking or thinking the spoken images of the words to ourselves, we effectively renew their phonological activation, thus

extending the longevity and holding capacity of our verbatim memory" (p.188) (also see Baddeley, 1986, cited in Swanson, Cooney, & O'Shaughnessy, 1998).

For both boys, it became apparent that affective considerations were very important factors in the efficacy of the repeated reading aspect of the intervention. Both required text which was of high interest. In fact, the interest factor seemed to take supremacy over the level of the text: when they were engaged and interested in what they were reading, their application of newfound reading skills and strategies was greatly improved. Provision of delayed feedback was also an important factor, contributing to growth in skills, strategies, and attitudes toward reading for both boys. For Joel, the feedback helped him see where he was in effect going in circles, but unable to pinpoint the source of his difficulty (ineffective decoding, inattention to punctuation, resulting in repeated re-reading). For Craig, it seemed to be necessary to help him activate a self-monitoring strategy. For both boys, highlighting their strengths before noting their weaknesses was important to building a positive concept of themselves as readers. Knowing concretely where they were experiencing difficulty provided the participants with the sense that there was something they could actually do themselves to improve their reading and, I feel, contributed to their growth in self-efficacy. Glimmers of this self-efficacy leading the participants to increased motivation to read were seen a few weeks after the intervention concluded, whether this trend continues remains to be seen.

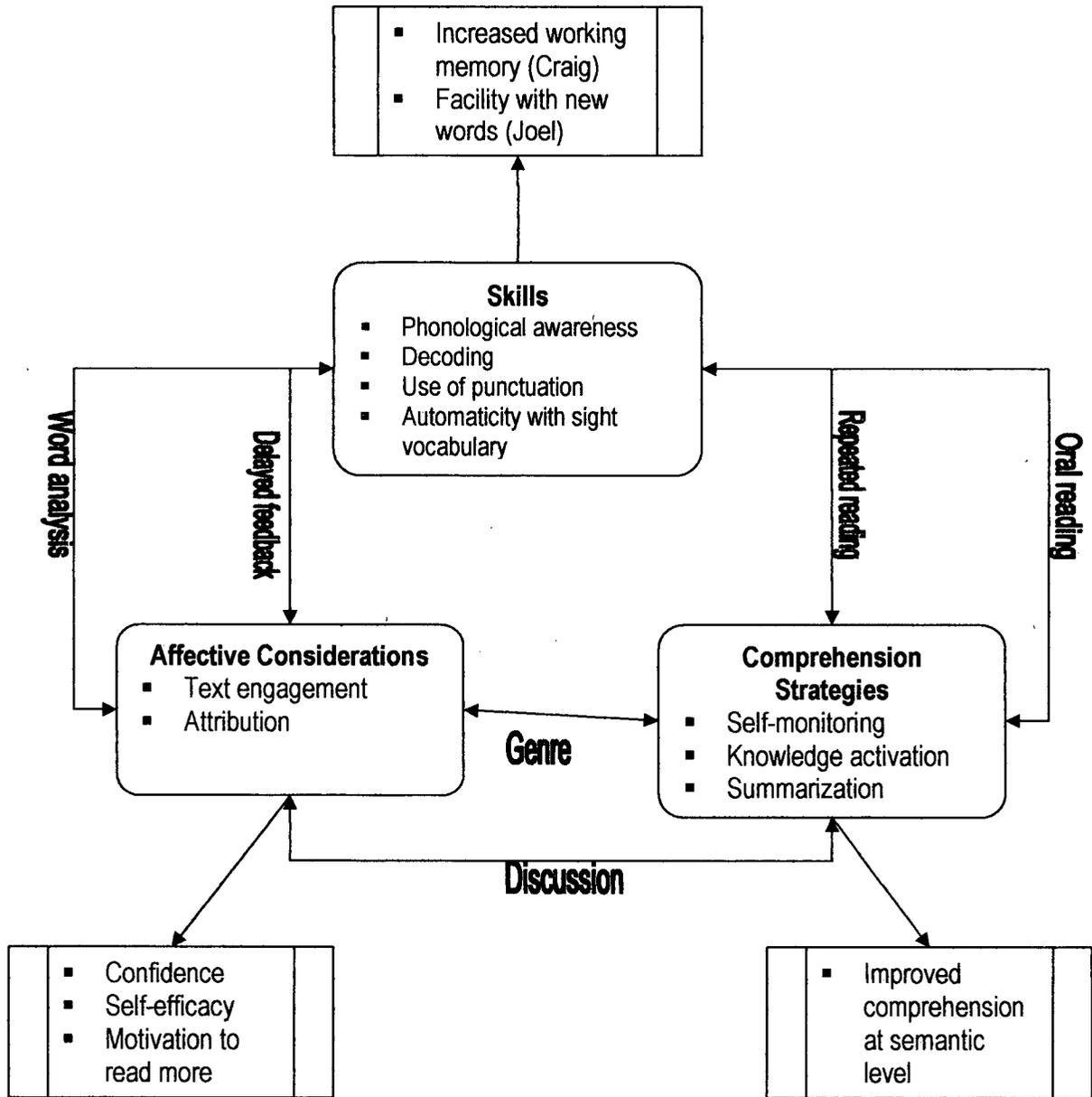
To return to the earlier "chicken and egg" discussion, I am reluctant to take sides as to the origins of both boys' reading improvement. It does appear that small amounts of early skill and strategy instruction provided the tools they needed to move from the deficient skills and ineffective strategies they were employing, by providing them with an expanded repertoire of skills and strategies. This instruction followed a short period of observation where I had been waiting to see if simply increasing their daily reading would have a positive effect. While it is possible waiting awhile longer to see if increased reading volume would have a positive impact (as advocated by Krashen & MacQuillan, 1998), my instinct at the time was that these were entrenched habits that both boys were engaged in and given their poor reading self-concepts, and it was necessary to intervene. It does appear that in the case of this intervention, the

acquisition of new skills and strategies was the starting point for overall reading improvement. However, both boys came to the study aware that they were experiencing difficulty and highly motivated to do something about it. When this is added to my telling them at the outset that the simple acts of reading more and learning a few strategies would help their situation, and their trust in my opinion as the "expert," the motivational impetus to engage in the increased reading may have provided, which in turn led to improved reading. The reality appears to be that both skill and strategy instruction, and the boys' intrinsic motivation to improve, were at work simultaneously to begin the process of strong positive change in their reading achievement.

While the participants' reading difficulty appeared to stem from two different sources, one likely a phonologically based processing difficulty and the other very likely resulting from weak instruction, the intervention had a favourable impact on both. Evidence for the efficacy of a method that utilized basic decoding and comprehension strategies, and fluency training through expository text is found not only in the participants' new sense of self-efficacy and nascent motivation to read more, but also in their gains in reading ability. For both participants, reading level for isolated word recognition, contextual word recognition and comprehension increased by at least two grade levels, placing both of them close to grade level. Secondly, the apparent improvement in phonological awareness and working memory in the participant thought to be experiencing difficulty in this area is seen as evidence for the efficacy of the methods employed in the study. Though it employed a very small sample, the positive results achieved with two diverse struggling readers may offer promise for understanding efficacious practices aimed at accelerating the reading progress of upper elementary struggling readers. Being an approach which attempted to provide explicit, scaffolded instruction, at an intensity that allowed the participants to experience success on a daily basis and attribute that success to the effort they were putting in, all in accordance with the findings presented in the literature review, no doubt helped that success. The interactions of each element of the method and the outcomes for the participants have been discussed in

this section and are presented below (figure 12). Again it must be noted that this is a circular picture, with each element influencing and being influenced by the other elements.

Figure 12
Interactions Between Instructional Goals, Processes and Methods



Education of the Researcher as a Result of the Study

A final note regarding the personal education the researcher received through this study is in order at this juncture. Coming into the study, my personal position regarding the reading process as an interactive process involving reader-based (top-down) and text-based (bottom-up) processes, simultaneously at work as conceptualized by Rummelhart (1994), was firmly in place. I was, however, carrying a certain degree of disillusionment with the socio-cultural approach to reading due to extreme top-down interpretations of the approach some leaders in the reading field seemed to have adopted. This left me predisposed to look favourably at a bottom-up emphasis as the possible solution to the difficulties older readers experience. Through the study and the excellent tuition of the two participants, I found that in reality the application of certain methods regarded as perhaps being aligned with bottom-up theories (such as phonological/phonemic awareness training and fluency training), while highly valuable in the study, had to be balanced by attention to issues of motivation, particularly engagement and self-efficacy. The conclusions of the study, as presented in chapter five, have left me feeling that I need to be more seriously investigating a sociocognitive processing model (Ruddell & Unrau, 1994) in my personal journey to understand the reading process as it applies to struggling readers.

Chapter Five: CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to address the cognitive and affective gaps that prevent upper primary school children from successfully making the transition to independent, fluent readers who employ a wide range of decoding and comprehension skills and strategies in their reading behaviour. The study sought to specifically investigate the extent to which determination of the cognitive and affective gaps that are present in the participants' reading behaviour, followed by direct reading instruction provided in an intensive tutorial setting, raised the participants' reading level, enabling them to successfully handle the required expository/informational text reading for their grade level.

The principal research question was: Does determination of the specific gaps in early reading processes, and an attempt to fill in those cognitive and affective gaps, result in improving the reading of two students experiencing difficulty at the intermediate level of elementary school?

Conclusions

The study found strong positive evidence that attention to weaknesses in early reading skills and strategies, when provided in an atmosphere which also addressed the affective needs of the upper elementary school reader, resulted in improved reading skills, strategies and attitudes toward reading. As efficient reading skills and strategies were internalized, the participants experienced a corresponding gain in comprehension. Affective attitudes toward reading in general were improved.

The most important finding of the study was that reading skills and strategies, were best improved through balancing the instruction of reading skills and strategies with affective factors. Removal of either of these three components would have resulted in a diminished outcome for the participants. A sub-question therefore may be asked: Would the participants have benefitted equally from a method which placed sole emphasis on either a text-based (bottom-up) approach or a reader-based (top-down) approach? The findings of the study suggest that the answer to this question is no.

- A reader-based approach to improve the participants' fluency, that emphasized immersion in text and gave no attention to reading skills and strategies, such as that suggested by Krashen and McQuillan (1998), would not have resulted in the same success. In the early stages of the study, both participants when left to simply read with no feedback supplied, demonstrated that they were trapped in a habitual cycle of ineffective strategies and deficient skills. It appeared that increasing reading volume, without corrective feedback, only provided the context for reinforcing ineffective strategies and the failure cycle: strategy and skill instruction to break this cycle was required.
- Similarly, a text-based approach that emphasized fluency training to meet the participants' area of skill deficiency, particularly automaticity with sight vocabulary, to the exclusion of affective considerations such as engagement with text, would not have derived the same success. Both readers demonstrated a disconnect of their self-monitoring for comprehension strategy when the text employed was outside their realm of experience or interest, rendering poor reading of material within their Independent level of reading ability. This held true even at the end of the intervention when their reading skills and strategies had shown tremendous improvement.

This argument underscores the first important conclusion of the study:

- **Interventions addressing the needs of struggling readers should balance the need to teach reading skills and strategies with affective factors.**

Secondly, and related to this finding is the role of popular literature in the fluency development of upper elementary level students experiencing reading difficulty. The use of popular literature provides an engaging context for skill and strategy development. While some teacher-monitoring of text level is necessary to ensure its readers are not overtaxing attentional reserves for decoding (Samuels & Flor, 1987), the need for careful attention to incrementally increasing text difficulty in fluency training as highlighted by Chard, et al. (2002) may not be as critical as their meta-analysis suggests. It appears that engaged reading of popular literature provides the context for conquering small difficulties with text, in support of Guthrie & Wigfeld's (2000) observation that "engaged readers can overcome obstacles to

achievement, and they can become agents of their own reading growth" (p.405). Repeated reading of such text subsequently provides the context for the fluency development many struggling readers require (Chall, 1983; Hoffman & Isaacs (1991); Samuels & Flor, 1987; Nathan & Stanovich, 2001; Samuels, 2002). Thus, the second important conclusion of the study is supported:

- **Popular literature in the expository genre appears to provide a valuable context for the fluency development of intermediate level struggling readers.**

While recognizing the complexity of the reading process and the inextricable connection between the development of skills, strategies and attitudes toward reading, key learnings implicit to these two conclusions are summarized below, attempting to temporarily separate these strands for the purposes of elucidation. While the sample size was small, it was a purposive sample (Palys, 2003), representative of a larger population of upper elementary struggling readers, and thus the key learnings are presented in a generalized fashion. I have attempted to support the validity of these statements through pattern matching (Yin, 1994).

Attitude toward Reading

- **Personal conception of what constitutes a good reader appears to heavily influence the reading behaviour of struggling readers.**

These conceptions worked negatively against the participants at the outset of the intervention, but as they internalized new skills and strategies, a new conception of what constitutes a good reader developed which positively influenced their reading behaviour.

- **The self-efficacy of struggling readers may be positively influenced through small amounts of explicit skill and strategy instruction taught within the larger context of engaged reading.**

Instruction which built on strengths and addressed weaknesses in reading skills and strategies provided the tools for the participants to improve their reading. Both participants stated that they felt they had become better readers; readers in control of the reading process. This new self-efficacy led the participants to attribute their success to the effort they expended, and gain the insight that future success

was tied into their effort. This is supported by Wigfield & Guthrie (1997) who found that perceived efficacy is viewed as one of the strongest predictors of reading achievement and Butler (1998) whose research found a strong relationship between a reader's motivational beliefs regarding self-efficacy and attribution, and the reader's strategic approaches to tasks.

- **Classroom reading programs which do not provide a wide-range of choice in literature may negatively affect attitudes toward reading of struggling readers and unnecessarily reinforce negative attributional beliefs.**

The preponderance of the narrative genre in the libraries of the participants' classrooms negatively impacted the participants' participation in extensive reading. For the participant who strongly disliked narrative text, a dearth of expository text choices in his classroom was one contributing factor in his avoidance of reading and provided reinforcement for his belief that he was not a good reader. For the participant who preferred narrative text, the outcome of this situation was that he had little experience with expository text reading for pleasure, thereby failing to gain the familiarity he needed with this genre in order to be successful with using reading for learning purposes (Stahl, 1999). (This was in addition to the problem that the narrative text available to him for classroom extensive reading was topically uninteresting and thus unengaging to him and provided limited access to Independent level reading practice.) Thorndyke's (1941, cited in Worthy, 2001) demonstration that students may learn new vocabulary most adequately through reading just one comic book per week, truly began the discussion of what actually constitutes good reading. Allington (2001) notes that magazines are generally found amongst the regular out-of-school reading choices of good readers, adding to Thorndyke's early conclusions regarding the positive reading outcomes of "alternative genres." The inclusion of magazines in classroom reading libraries provides students who are reluctant readers with the engaging materials they need (Guthrie & Wigfield, 2000) and is seen as an important step in recognizing the expository reading preferences of many boys (Wilkenson, 1998; Millard 1994, cited in Millard, 1997; McCormick, 1999).

Reading Strategies

- **Ability to apply strategic reading behaviours appears to be strongly influenced by engagement with text.**

It was particularly noted that the participants' use of two core comprehension strategies, self-monitoring and knowledge activation, was positively affected when text was engaging and interesting to them. Conversely, self-monitoring and knowledge activation strategies were, in effect, switched-off when the text was unappealing to the participants (though well within their independent reading level). This finding is supported by Asher and Markell's (1974, cited in Pritchard) finding that boys' performance in reading comprehension seems to be facilitated by high interest material

- **Core reading strategies may be instructed with struggling readers.**

Instruction which introduced the participants to a limited number of core foundational strategies for self-monitoring, knowledge activation, and summarization (Alexander, et al., 1998), and guided the participants to articulate those strategies prior to reading (Dole, 1996; Butler, 1998), expanded the repertoire of strategies independently applied by the participants in their expository text reading. This supports the observations of Swanson, Cooney, & O'Shaughnessy (1998) who caution that the attempt to teach too many strategies often results in students not truly internalizing strategies for independent future application. Concentrating the strategy training on core, foundational strategies appeared to ensure that the participants learned a few strategies and learned them well. This finding regarding the explicit instruction of comprehension strategies supports the work of Pearson (1984).

- **Development of a self-monitoring strategy appears to lay the necessary foundation for knowledge activation and summarization strategies.**

This was evident for both participants, but particularly so for the participant who experienced a phonological core deficit. His self-monitoring for comprehension strategies were applied solely at the lexical level at the outset of the intervention. As he began to monitor his own reading, through actively listening to himself read orally, and began increasingly applying a semantic standard to his comprehension

monitoring, his nascent ability to apply knowledge activation and summarization strategies was strengthened. This supports the observations of Garner (1994) who notes that poor readers have little awareness of the the need to make sense of the text they read: their focus is on the decoding process and not the making of meaning. And that these readers seem not to be cognizant of instances when they do not understand. Leading the participants in the early stages of the intervention to actively self-monitor, appeared to set the stage for success in knowledge activation and summarization strategies. Improvement in the ability to self-monitor is highlighted by Clay (1985), Garner (1994), Gaskins (1998) and Butler (1998a & 1998b) (among others) as being of utmost importance in the amelioration of reading difficulty.

- **Oral reading provides a useful vehicle for the development of self-monitoring for comprehension strategies.**

Both participants needed to move to a semantic level of comprehension monitoring . Having, in effect, remained stuck in lexical or syntactic self-monitoring standards (Baker, cited in Alexander, et al., 1998), they required the explicit opportunity provided by oral reading to begin to orchestrate the use of their “phonological processor” with their “orthographic, meaning and context processors” as illustrated by Adams’ (1990) interactive model of the reading process.

- **Development of self-monitoring for comprehension strategies, in conjunction with engaged oral reading, appears to provide the context for the expansion of working memory.**

This observation follows from the point above. Encouraging the participants to take their knowledge of prosody in oral speech, and apply it to oral reading, resulted in them processing text at the phrasal level (Adams, 1990; Schreiber, 1991). This processing beyond the lexical level actually seemed to have the effect of expanding working memory in the participant who struggled in this area and was evidenced in his ability to independently process longer sentences and his movement away from the ineffective strategy (creation of shorter sentences) he had developed to compensate for deficiency in working memory. Adams (1990) refers to this as the articulatory loop: “By speaking or thinking the spoken images of the

words to ourselves, we effectively renew their phonological activation, thus extending the longevity and holding capacity of our verbatim memory” (p.188).

Reading Skills

- **Oral repeated reading provides a useful vehicle for addressing the fluency difficulty of intermediate level struggling readers.**

That re-reading of text for the purpose of presentation to an audience improves fluency, is noted here as an important aspect of oral repeated reading’s contribution toward fluency (Chall, 1983; Worthy, 2001; Yopp & Yopp, 2003). Additionally, the use of listening-previewing to provide a model of fluent reading, and the immediate oral re-reading of that material by the struggling reader (Chard, et al., 2002), provides a repeated reading context which enables the struggling reader to gain control of the prosodic features which contribute to fluent reading (i.e. appropriate phrasing and expression) (Shreiber, 1991).

- **Gaining control of the prosodic features of text appears to contribute to the comprehension development of struggling readers.**

Explicit instruction in the function of punctuation in text, and oral reading which provided practice with heeding punctuation, moved the participants beyond word-by-word reading, encouraging processing of larger “chunks of meaning,” thereby facilitating comprehension growth. This finding supports the observations of Shreiber (1991) who argues for the use of specific instruction in the prosodic features of text to scaffold the development of phrasal reading and Adams (1990) who maintains that comprehension at the phrasal level best facilitates comprehension of the whole text. It also supports the findings of Anderson and Roit (1993) who found that comprehension improved when oral reading was employed in the instruction struggling readers received.

- **Phonemic and phonological awareness may be strengthened in intermediate level struggling readers.**

The participants’ phonemic awareness was positively influenced through the explicit instruction in word analysis, in support of research which suggests that phoneme awareness is strongly influenced by

experience (Mann, 1998). However, his type of explicit instruction received a relatively minor portion of the tutorial session (less than 25%) and thus it is conjectured that the oral/aural feedback loop or articulatory loop fostered through the listening previewing and the participants' reading aloud enhanced phonological processing and that this feedback loop was strengthened by the encouragement of self-monitoring strategies as depicted by Adams (1990) interactive reading model. This finding is strengthened by studies which found that effective intervention with older readers required phonological and phonemic awareness components (O'Shaughnessy & Swanson, 2000; Torgesen, 2001; Pogorzelski & Wheldall, 2002) and yielded even stronger results when strategy instruction was added to the phonological awareness training (Lovett, et al., 2000). However, the relatively simple measures which positively influenced the phonological awareness of the participant with mild phonological processing difficulty in this study seems to raise a note of caution regarding over-emphasizing phonological and phonemic awareness training with all struggling readers.

- **The use of some aspects of fluency training may be counterproductive to the development of reading skills in struggling readers.**

Fluency training, based on the work of Samuels (2002) who advocates having students chart their reading speed as they read and re-read for fluency, as it is presented in some popular commercial programs (for example, Jamestown's *Timed Readings* (Spargo, 1989)) may be harmful to struggling readers. For the participants in this study, whose pre-intervention conception of good reading focused on reading speed, the encouragement to read quickly in much of these materials appeared to exacerbate some of the negative habits they engaged in: word calling or employment of nonsense substitutions. Additionally, the use of strictly graded passages which contain no appeal to young readers, encouraged a disconnect that seemed to prevent development of skills such as paying attention to text for purposes of word identification, and the use of prosodic features: this disconnect seemed to actually work against the development of self-monitoring strategies.

Note: While the majority of the key learnings presented here reflect the prevailing wisdom of much of the extant research, this finding regarding engagement and fluency training is one which I have not personally come across in the literature, and may present a new avenue for investigation in the field of reading disability.

- **Mastery of gaps in early reading skills appears to improve the reading of struggling readers.**

Provision of judicious, individualized attention to skill deficits provided the participants with the tools they were lacking for handling text. This is supported by Adams (1994) who states that difficulty with recognition of letters at the level of the individual letter and/or incomplete knowledge of likely letter combinations is often found in students with reading difficulty. It is also supported by studies which found that phonological and phonemic awareness training was a critical component of effective reading interventions (Lovett, et al., 2000; O'Shaughnessy & Swanson, 2000; Torgesen, 2001; Pogorzelski & Wheldall, 2002). The role of instruction in the use of punctuation (Shreiber, 1991) has already been elaborated upon, but was another skill area in which the participants benefited from receiving instruction.

- **Mastery of gaps in early reading skills appears to have an effect on affective measures such as self-efficacy and conception of self as a reader.**

Mastery of skills not only provided the participants with the tools required, but as they articulated, provided them with the sense of empowerment which self-efficacy hinges upon (Wigfield & Guthrie, 1997; Butler, 1998a). Ensuring that this skill instruction was provided with careful attention to giving it a relatively small emphasis (Cunningham & Cunningham, 2002) in the larger context of a meaning focused program of regular connected, engaging text, is seen as an important factor in its ability to contribute to the participants' sense of self-efficacy.

Limitations

1. The study was carried out in the researcher's home. This artificial setting may represent a threat to the validity of the results. Considering this study a pilot study, an attempt at replication of the results

through transferring the method used in the intervention to a school-based setting is warranted for the validation process.

2. In order to provide the most effective intervention for those experiencing reading difficulty, a collaborative effort between those providing the intervention and the classroom teacher is essential. Unfortunately, though invited, the participants' teachers both chose not to participate in the study at the outset. Their insights would have provided an essential depth to the study, just as knowledge of the study's methodologies may have impacted their classroom practice. However, one of the teachers did ask to speak with the researcher at the conclusion of the study (with the permission of the participant's parents) and it is hoped that this contact will result in the ongoing classroom support for the participant.
3. The time constraints imposed by providing the instruction in daily half-hour sessions did not allow for the contextualized writing felt to be necessary for the most effective intervention (Clay, 1985). Increasing the sessions to forty-five minutes would have addressed this constraint or it may have been addressed through a more collaborative approach with the classroom teachers.
4. Though strong positive outcomes were achieved for both participants in the study, and these outcomes, at the conclusion of the data-collection, were being generalized to the participants' classroom achievement, the long-term generalizability of the outcomes is not known. A follow-up interview with the participants and their parents is thus warranted in order to fully ascertain the significance of the results.
5. Obtaining suitable expository text was a difficult task at the outset of the study. Once the National Geographic for Kids source was discovered, and the material proved to be engaging to the participants, the next difficulty became the wide range of reading difficulty found within the text of this magazine. I addressed this difficulty through scaffolding: giving greater amounts of pre-reading instruction to passages which appeared to be beyond the independent/instructional level of the participants. It wasn't until after the data collection was completed that I discovered that the Lexile

Framework (Stenner, 1996, cited in Allington, 2001) is applied by National Geographic for Kids to many of their articles and is available online (Primary Search Database). See Appendix K for this system. Earlier access to this information may have helped with the provision of text which was more accurately levelled, and may have enhanced the outcomes.

6. A simple assessment of working memory should have been pretested and posttested. Since the purposive sample was to include only students who had not previously been identified with a specific reading disability, I had not expected to see this type of difficulty. This obviously was not a safe assumption to make. Simple tests where the participants repeat sentences of increasing length and complexity after hearing them aurally could be used to assess working memory. A pretest and a posttest to quantitatively measure this growth would have added to the validity of the study's anecdotal observation regarding working memory.

Implications for Further Research

1. Following from the first limitation listed above, employment of the method used in this study in a classroom setting is warranted to test the validity of the outcomes and to provide strong research-based recommendations to classroom teachers regarding the use of popular expository literature for fluency training.
2. The concern that was raised in the conclusions of this study regarding the possible negative effect of using commercial fluency materials and timing procedures with struggling readers needs to be further investigated. A study which compares the outcomes of an intervention employing commercial fluency packages with the outcomes of a separate intervention employing the authentic text of popular expository literature could investigate the validity of the concern. This comparison could be further sub-divided into a methodology which employs timing and one which does not, for both the commercial fluency text and the authentic text.

3. The apparent finding that the overall phonological processing of the student thought to be experiencing a phonological core deficit may have been improved as much by self-monitored oral reading as by the simple phonemic awareness tasks needs to be more rigorously assessed. This could be tested by comparing two groups of intermediate students in an experiment where one group engages in the method employed in this study using repeated oral reading and phonemic awareness tasks, and the other group engages in repeated oral reading with no phonemic awareness tasks.

Recommendations for Teachers

1. It is important for teachers of all elementary school students, primary and intermediate level, to have an understanding of the developmental stages of reading. Effectively scaffolding students' reading development requires an understanding of the particular stage the student is operating within, the ability to provide instruction which will strengthen the skills and strategies inherent to that stage, and the provision of just enough challenge to move the student toward the next stage.
2. Reading programs which provide students with a rich variety of texts, in both the narrative and expository genres, and which value the spectrum of works from those considered classic to those considered popular culture, contribute greatly toward producing students who not only know how to read, but who enjoy reading and are more likely to extend their reading beyond the classroom. Teachers should be mindful of their own biases when selecting text and ensure that their students' needs and interests are taken into consideration in the formation of the classroom reading program.
3. Students at both the primary and intermediate level benefit greatly from experiences with oral reading. Unfortunately, when oral reading is employed, it is often practiced only in the form of round robin or popcorn reading, a form of unrehearsed oral reading shown to have little value for students in general, and damaging to the struggling reader. Incorporating oral reading experiences which provide students with the opportunity to practice reading the text first, at times

preceded by listening previewing, provides the opportunity struggling readers require to develop fluency and (as postulated by this study's findings) to increase phonological awareness and working memory. These experiences need to be shaped so as not to be tedious or boring, and conversely, not to be threatening to the reluctant. Many appropriate activities have been elaborated upon in chapter two, ranging from choral reading and reader's theatre, to the suggestions of Yopp & Yopp (2003): Book Bits, Powerful Passages, and Poetry Reconstruction (see pp. 31-32 for details).

4. Comprehension strategies should be instructed in the classroom reading program (Pearson, 1984; Duke & Pearson, 2002). It is particularly important for the struggling reader that the early strategies often taken for granted by the more able reader, such as self-monitoring for comprehension and taking measures to repair comprehension breakdowns, be explicitly taught. Once self-monitoring is in place, simple activation of prior knowledge and summarization strategies should be instructed. As strategy instruction becomes a valued practice in intermediate classrooms, the admonition to teach only a few strategies, but teach them well (Swanson, Cooney, & O'Shaughnessy, 1998) is one which will benefit all students.
5. All intervention with struggling readers should take a holistic approach to address the spectrum of difficulties they face; skill and strategy instruction should be undertaken in a manner that supports affective aspects of the reader and contributes to engagement and motivation to read more extensively. Quick fixes, especially those offered in some commercial packages, should be carefully scrutinized by teachers, to determine if they are supportive of the complex needs of the struggling reader, and perhaps more importantly, to determine that they are not actually harmful.

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Extreme Approaches to Early Reading Instruction

A response to the article, "Why Innovations Come and Go (and Mostly Go): The Case of Whole Language"
by Steven Stahl (Educational Researcher, 24.8 (1999): 13 – 22)

In his article, "Why Innovations Come and Go (and Mostly Go): The Case of Whole Language," Steven Stahl (1999) presents his conception of the monumental success of the Whole Language movement. His position that the movement was political in its self-promotion and in its goals was particularly interesting to me as I contemplated the parallels between the widespread adoption of whole language philosophies in the 1970s and 1980s and the current rush to embrace synthetic phonic approaches to reading instruction. I find my reaction rather interesting as I don't typically involve myself with top-level policy positions when it comes to instruction. This paper will first summarize Stahl's article and then attempt to analyze the consequences of extreme approaches to reading instruction. It will then conclude with a discussion of how this issue has played itself out in my teaching experience.

Stahl opens by making the observation that the whole language movement appears to have lost its momentum, but we should be careful not to miss the opportunity it provided for learning about reading instruction and the ebb and flow of innovation in education. He contends that even though it shares the same ideological basis as the activity-based educational philosophy of Francis Parker and John Dewey from the late 19th century and resembles the Language Experience Approach of the 1960s, its acceptance in mainstream reading education is unprecedented.

Though Whole Language never did come to be fully defined and came to best be described in terms of what it was not, it nonetheless had widespread impact, changing the delivery of reading instruction in classrooms throughout the Western world as well as creating a whole new avenue of research for those who studied reading. Stahl credits the Whole Language movement for two major shifts in the understanding of reading and reading instruction: First, the primary purpose of instruction shifted from being seen as that which develops cognitive processes during reading to one of motivating children to become lifelong readers; and secondly, the reading process shifted from being viewed as information-gathering to responding aesthetically to literature. Though the Whole Language approach did have less of a stratifying effect in primary classrooms and thus may have provided a more supportive climate for struggling readers, Stahl maintains that Whole language recipients did not achieve as highly as their counterparts in more "traditional"

schools. Thus the claim that the Whole Language approach was more motivating to young readers was not borne out. Additionally, due to the Whole Language stress on trade literature these children did not receive the grounding they needed for handling expository text, and thus were unprepared for the demands of the intermediate and higher grades.

Stahl then turns to what he considers the unprecedented political nature of Whole Language. In its self-promotion, the Whole Language movement used pejorative terms, designed to create positive connotations for itself and negative connotations for the traditional approach to reading instruction. Its claim to be the instructional mode which would help the disadvantaged was not realized as it failed to provide those children with the very tools they required for acquisition of reading and actually served to deny them the language skills needed for full participation in Western society. The result of all of this has been the radical swing of many school districts in the United States from the top-down approach of Whole Language to embracing the bottom-up nature of the synthetic phonics approach.

Stahl's statement that "[t]he rise and decline of the whole language movement is a prime example of what Slavin (1989, cited in Stahl, 1999) likens to swings of the pendulum, in which an approach becomes widely accepted before its effects have been studied," (p.20) is the notion I would like to consider for the remainder of this paper, for it has a profound impact on those to whom teachers deliver services.

Why is it that various forms of reading instruction have come to be associated with one political movement or another? Could it be perhaps that reading is so fundamental to Western society in the dissemination of information and formation of ideological position that it is a natural target for politicians seeking to make their voices heard? Or could it be that success in any subject area is predicated on a strong foundation in reading and thus ensuring that children receive "good" reading instruction is at the heart of the electorate's concern, making this an issue which politicians may easily play upon? Before completing this week's readings, I had no idea of the lengths to which proponents of whole language and proponents of phonics have gone in order bring their positions into the limelight. Nevertheless, the swings we are witnessing in parts of the U.S. appear to be extreme. The rhetoric engaged in by the political right on the Phonics side and political left on the Whole language side (broad generalizations, I realize, but I use them to illustrate my point), seems to use reading instruction as a political gambit and is a huge concern, in and of itself. But

even more alarming is the effect this polarization has upon some of the most vulnerable members of our society: the actual recipients of reading instruction. Children from disadvantaged backgrounds are placed in an even more precarious position as a result of this politicization of reading instruction.

The extreme positions adopted by those in power ignore the wealth of knowledge garnered over the last twenty years which unreservedly points to the benefits of a balanced approach to reading instruction. When taken into the wider political arena the effects are intensified. The danger of accepting the purely top-down (Whole language) or the purely bottom-up (phonic) approach is that both are by nature so extreme, that adoption of one, to the exclusion of the other, automatically steers the approach toward rejection at some point in the future. When these approaches are adopted at the top levels of policy-making, the rejection is taken on as an election issue, the rhetoric begins, and polarization intensifies. Strong students with experienced, knowledgeable teachers may well survive the chaos: it is the weak who suffer. Thus the very people these extreme models purport to help are only harmed by their exclusivity.

Reading instruction itself suffers from the adoption of extremes, for when each extreme reaches its zenith, the merits of the other extreme are ignored. When adopted as the underlying instructional basis, any extreme approach is bound to marginalize greater numbers of children than our group approach to education already does. Examination of the two extremes in question highlights this effect:

To adopt a bottom-up, synthetic phonic approach is to ignore the main goal of reading: making meaning. (By synthetic phonics I refer to that which is totally decontextualized and attempts to instruct children in phonic knowledge in ways which are contrived and devoid of real meaning. I am not suggesting that all systematic phonic instructional programs are suspect or extreme.) A purely bottom-up approach such as synthetic phonics which stress accuracy in spelling and word recognition negates early learners' attempts to approximate conventionality, and by doing so the developmental sequence of reading acquisition that has been so helpful in giving teachers a sense of what to teach at optimal times in a child's development is in danger of being disregarded. The adoption of purely bottom-up approaches must deny methods that top-down approaches have introduced. Thus we run the danger of dropping helpful assessment techniques such as miscue analysis that have emerged from the Whole Language approach. Additionally, we

risk shying away from authentic opportunities for reading and writing, not to mention the element of choice, which have both proven to be excellent motivators for early readers and writers.

On the other hand, the opposite extreme of adopting a purely top-down or whole language approach ignores the fact that all young readers, to varying degrees, require instruction in the skills and processes of reading. This degree is dependent on background. Those with impoverished literacy backgrounds are often those who are of lower socio-economic status or may be those whose mother tongue is not the language of instruction. These are the very children who benefit, in the early stages, from explicit instruction in reading behaviours such as the encoding of speech in print, directionality, the orthographic system, strategies for decoding unknown words, metacognitive strategies for monitoring reading, and activities for fostering accuracy and fluency, for they have not had the opportunity to internalize these concepts in their pre-school or pre-English careers. Though these are the children whole language set out to help through applauding their early literacy approximations, they end up being the children harmed the most, for research widely demonstrates the need for explicit and systematic instruction in early reading behaviours, strategies and skills, with these students (and indeed for all students, to varying degrees).

Embracing any form of reading instruction which does not balance the myriad needs of young learners, is to embrace an approach doomed to failure: failure of the wider acceptance of the approach itself; and failure to the students it sets out to serve. Reading instruction and those who provide it must hold themselves above wild swings of the educational pendulum. They must instead rely upon a balanced and well-researched methodology designed to shape itself to the particular needs of each group of learners with whom it interacts.

I turn now to a discussion of my own experience with one extreme of reading instruction: Whole Language. The year I completed my reading methods courses (1982-1983) exemplified the radical swing reading instruction was undergoing at that time. My instructors stated from the outset that they taught only Whole Language and by this they meant they would not teach the use of basal readers nor would they teach phonic instruction. In contrast, instructors for other sections of the same course were simultaneously teaching only the use of basal readers and phonics in their reading methods syllabus. This state of polarization amongst the experts left me, the new teacher, in a perilous position at the end of my teacher training: I had a wonderful sense of how to provide a holistic, reader-centred program of reading instruction, but I had little understanding of the basic

processes associated with reading acquisition. Once I began teaching, this basic gap in my knowledge became readily apparent: I had no idea of how to help the struggling readers in my class. This affected a personal state of professional crisis: I intuitively knew that the students who were learning to read under my instruction would have learned to read anyway, but the children who weren't learning desperately needed my help and I had no definitive means to help them.

The other area in which I was culpable was the denigration of teachers who still employed phonic instruction and used basal readers. While not a position I pointedly articulated, my own tendency to think privately of these teachers as "old-school," and my methods as superior, was probably enough to convey my disapproval.

Fortunately for me (and my future students), I took some time off from teaching to be home with my own children, and it was when my first daughter entered first grade and I witnessed a marvellous blending of whole language activities with activities I had formerly categorized as "old school" that I came to embrace the merits of a balanced approach to literacy. This was the early '90s and excellent literature advocating a balanced literacy approach began to be available.

My re-entry to the classroom was thus marked by a far better understanding of the reading process. As I continue to acquire a broader understanding of how children learn to read I am far less susceptible to the swings of the educational pendulum and better enabled to evaluate each new program I encounter, in addition to the ability to engage other educators in discussion regarding what constitutes best practice in reading instruction.

I am encouraged by the fact that many teachers whose training and experience is similar to mine have engaged in a similar evolution of teaching practice. As educators seek to find information to fill their knowledge gaps from credible researchers, the mix of good intuition with empirical knowledge will only improve instruction for all students. I do find myself feeling very concerned, however, regarding the mandates laid on teachers from those with the power to withhold funding: far too much of their motivation is political in nature from my point of view. At this point in time then, I see one direction my teaching must take is that of voicing the call to moderation and research-based practice. For teachers to not engage in this act may well result in our being forced to adopt instructional approaches to which we are not only philosophically opposed, but which will inevitably be harmful to those who need us most.

Kimberly Lenters
14 February 2003

Crossing the Divide: Closing the Cognitive and Affective Gaps That Prevent Successful Reading in the Upper Elementary Years

Informal Interest Inventory

Learner's Name:
Occupation:
Gender:

Age:
Educational Level:
Interview Setting:

Date:

Leisure Activities

1. What do you enjoy doing in your free time?
2. What do you do after school?

In the evening?

On the weekend?
3. Do you enjoy sports?

If so, which ones?

Do you play or mostly watch?
4. Do you take any lessons outside of school?
5. Do you collect things?

If so, what?
6. Do you like animals?

Any pets?
7. Do you watch television?

What do you like to watch?

Attitudes toward Education

1. Do you like school?
2. What is your favourite subject?
3. What subject(s) do you not like?

4. Has anyone in your family been to college or university?

Attitudes toward Reading

1. Do you like being read to?

If so, what do you like to hear?

If not, do you have any reasons you can think of?

2. Do you like to read?

If so, what do you like to read?

If not, why?

3. Do you have any favourite books?

What are they?

4. If someone gives you a book for a gift, do you feel excited? Or is a book a so-so kind of gift?

5. Which do you prefer to give to your friends when it is their birthday, books or toys?

Why?

6. Do you enjoy reading aloud for your parents?

Why?

How about your teacher?

Why?

In front of the class?

Why?

7. Do you like to write?

If so, what kind of writing?

8. Do you like to talk to friends?

9. Do you like to listen while others talk?

Reading Behaviours (from Goodman's III')

1. When you are reading and come to something you do not know, what do you do?
Do you ever do anything else?
2. Who is a good reader that you know?
3. What makes _____ a good reader?
4. Do you think _____ ever comes to something s/he doesn't know?
5. "Yes" When _____ does come to something s/he doesn't know, what do you think she/he does?

"No" Suppose _____ comes to something s/he doesn't know. What do you think she/he would do?
6. If you knew someone was having trouble reading how would you help that person?
7. What would a/your teacher do to help that person?
8. How did you learn to read?
9. What would you like to do better as a reader?
10. Do you think you are a good reader? Why?

Crossing the Divide: Closing the Cognitive and Affective Gaps That Prevent Successful Reading in the Upper Elementary Years

-Parental Interview Questions-

Learner's name:

Date:

Parent(s) interviewed:

1. Level of parent's education:
Mother:
Father:
2. Occupations:
Father:

Mother:
3. Learner's position in relation to siblings:
4. Has father's level of education impacted learner (positive or negative)?

Mother's?
5. Has father's occupation had any effects on learner (positive or negative)?

Mother's?
6. Do you remember reading to your child in his/her early years?

How often?

What was his/her response to being read to?
7. Do you presently read to your child?
8. What is your child's present response to reading?
9. What types of reading material does your child enjoy?
(e.g. narrative books, factual books, comic books, internet, any particular themes)
10. Do you personally enjoy reading?
Mother?
Father?
11. What types of reading materials are common in your home?
(e.g. books (fiction, non-fiction), newspapers, magazines, vocational reports)
12. Are there things that you and your child enjoy doing together?

Mother:
Work activities:
Play/sports activities:
Cultural (museums, concerts, plays, clubs, etc.):

Father:
Work activities:
Play/sports activities:
Cultural (museums, concerts, plays, clubs, etc.):

13. Language used at home?
14. Do you recall any speech or language difficulties being present in your child's early years?
15. Does your child currently experience any language difficulties with speaking or hearing or processing of which you are aware?
16. Does your child have any difficulties associated with vision?
17. Which would you use to describe your child's personality?
 - Reasonable self-concept
 - Shy
 - Lacking self-confidence
 - Show-off, constantly looking for attention
 - Uncooperative and willful
18. Why is it important that your child does or does not succeed educationally?

A F K P W Z

B H O J U

C Y L Q M

D N S X I

E G R V T

a f k p w z

b h o j u a

c y l q m

d n s x i

e g r v t

Common Consonant Clusters and Digraphs

ch

dr

sh

sk

th

str

bl

fl

gr

sl

sp

sw

br

fr

pl

sm

spl

tr

cl

gl

pr

sn

spr

tw

cr

ph

sc

wh

squ

Common vowel combinations

au  **caught**

aw  **paw**

oi  **boil**

oy  **toy**

oo  **cool**

oo  **foot**

ou  **out**

ow  **cow**

ow  **snow**

Rhyme Detection

Teacher: Rhymes are words that sound the same at the end. *Bat* rhymes with *cat*; *man* rhymes with *can*. Does *ball* rhyme with *tall*? Yes, *ball* rhymes with *tall*. Not all words rhyme. Does *book* rhyme with *cup*? No, *book* and *cup* do not rhyme because *book* ends with *ook* and *cup* ends with *up*. Does *all* rhyme with *tall*? Yes! Now I am going to say some words, and I want you to tell me if they rhyme.

- | | |
|------------------|-----------------|
| 1. dad-sad | 11. me—see |
| 2. set—get | 11. game—can |
| 3. head-bed | 12. want—went |
| 4. cook—bee | 13. joy—boy |
| 5. eat—seat | 14. moon—soon |
| 6. farm—car | 15. say—may |
| 7. been—seen | 16. snow—cold |
| 8. come—mom | 17. cake—make |
| 9. cow-bird | 18. store-more |
| 10. flower—power | 19. light—night |

Score: 12
($x = 14$)

Children tested in April and May of the kindergarten year scored a mean of 14/20 on this task and it took approximately 1 to 2 minutes to administer (Yopp, 1988).

Blending

Teacher: Try to guess what word I am saying. C – ar, what word did I say?

- | | |
|-----------|------------|
| 1. i-s | 16. c-at |
| 2. d-o | 17. s-eat |
| 3. b-e | 18. st-ep |
| 4. i-t | 19. m-ine |
| 5. m-y | 20. s-it |
| 6. t-o | 21. d-o-g |
| 7. o-n | 22. b-a-g |
| 8. s-ee | 23. c-u-p |
| 9. u-p | 24. s-i-ck |
| 10. i-n | 25. b-oo-k |
| 11. m-om | 26. c-oat |
| 12. c-ut | 27. m-a-n |
| 13. h-ead | 28. f-i-ve |
| 14. b-all | 29. w-a-sh |
| 15. l-eg | 30. h-eat |

Score: /30
(x = 20)

Segmenting

Teacher: I have a language that I want to teach you. In this language, words are broken apart and each sound is said separately. For example, the word up is said /u/ /p/. The word dog is said like /d//o//g/. The word duck is said like /d//u//k/. Now it is your turn. Say seat. Right /s//e//a//t/. Now try these words:

- | | |
|---------|---------|
| 1. is | 12. no |
| 2. cat | 13. boy |
| 3. men | 14. sit |
| 4. to | 15. in |
| 5. car | 16. do |
| 6. bee | 17. leg |
| 7. sun | 18. on |
| 8. if | 19. cup |
| 9. ball | 20. yes |
| 10. so | 21. me |
| 11. pen | 22. won |

Score: /22

Yopp (1988) found that children in April and May of the kindergarten year achieved a mean score of 12 out of 22.

Making and Writing Words

Vowels	Consonants
--------	------------

1	6	11
2	7	12
3	8	13
4	9	14
5	10	15

T-1	T-2	T-3
-----	-----	-----

	Prefix	Root
atypical		
disobey		
adjoining		
disagree		
beside		
encircle		
befriend		
ingrown		
beloved		
dishonest		
bedazzled		
disability		
dethrone		
disuse		
decontaminate		
disappear		
deactivate		
encamp		
debug		
exterminate		
incoming		
input		
preschool		
prowar		
informal		
preview		
prolong		
precaution		

	Prefix	Root
repay		
untrue		
rewrite		
unwrap		
reload		
unlawful		
reopen		
unconscious		
rearrange		
undisturbed		
reactivate		
unwashed		
submarine		
subzero		
subsoil		
unfair		
untie		
uncooked		
unfinished		
uncertain		

Which prefixes did you find?

Can you make a new word with each of these prefixes?

What is a prefix?

	Suffix	Root
enjoyable		
shortage		
musical		
appearance		
attendant		
imaginary		
informative		
relaxation		
information		
existence		
excellent		
helper		
bakery		
delightful		
suggestion		
stupidity		
expensive		
alphabetize		
spotless		
quickly		
refreshment		
sickness		
actor		
inspector		
joyous		
dangerous		
growth		
warmth		

	Suffix	Root
loyalty		
safety		
cruelty		
homeward		
westward		
rainy		
windy		
gloomy		
comfortable		
wreckage		
personal		
original		
performance		
attendant		
starvation		
talkative		
persistence		
insistent		
teacher		
player		
bravery		
careful		
cheerful		
creation		
discussion		
productive		
consciously		
friendly		
slowly		

Which suffixes did you find?

Can you make a new word with each of these suffixes?

What is a suffix?

Crossing the Divide: Closing the Cognitive and Affective Gaps That Prevent Successful Reading in the Upper Elementary Years

**-Parental Interview Questions-
Post-Intervention**

Learner's name:

Date:

Parent(s) interviewed:

1. How would you describe your child's experience with the project?

2. Have you noted any changes in his/her reading on the following levels:
 - a. Fluency

 - b. Comprehension

 - c. Use of strategies for decoding unknown words

 - d. Use of strategies for self-correction

3. Have you noted any difference in attitude toward reading?

4. Is your child finding homework to be any easier?

5. Does your child participate in free-reading less, the same or more since participating in the study?

6. Have you spoken with your child's teacher about his/her reading? Has the teacher noted any differences?

7. In your opinion, what was helpful with regard to the procedures used?

8. In your opinion, what was not helpful?

9. How often were you able to complete the repeated reading homework?

10. Is there anything else you would like to know or to add to what you have already said?

**Crossing the Divide: Closing the Cognitive and Affective Gaps That Prevent Successful
Reading in the Upper Elementary Years**

Informal Interest Inventory

Post-Intervention

Learner's Name:

Age:

Date:

Occupation:

Educational Level:

Gender:

Attitudes toward Reading

1. Do you like to read?
If so, what do you like to read?

If not, why?
2. Do you enjoy reading aloud for your parents?

How about your teacher?

In front of the class?

Reading Behaviours (from Goodman's III¹)

1. When you are reading and come to something you do not know, what do you do?

Do you ever do anything else?
2. Who is a good reader that you know?
3. What makes _____ a good reader?
4. Do you think _____ ever comes to something s/he doesn't know?
5. "Yes" When _____ does come to something s/he doesn't know, what do you think she/he does?
6. If you knew someone was having trouble reading how would you help that person?
7. What would a/your teacher do to help that person?
8. What would you like to do better as a reader?

Goodman, Y.M., Watson, D.J., Burke, C.L. (1987) *Reading Miscue Inventory*. Katonah, NY: Richard C. Owen, p.219.

9. Do you think you are a good reader? Why?
11. Can you give me some examples of ways that you have become a better reader?
12. What did you enjoy about the time we spent reading together?
13. What did you not enjoy?
14. Is there anything that you felt was not helpful or was confusing?
15. You told me your goals back in June were that you wanted to read faster and smoother. Do you feel that you achieved your goals?

The Mane Story

The surprising truth about this cat's big hair

If the lion is the “king of beasts,” his mane is his crown. Male lions are the only cats with manes, and they use them to win and defend territory. What does a big hairy head have to do with keeping a kingdom? It's all about a “look.” A mane makes a male lion look bigger than he is, both from the side and head-on. And in the lion's world, bigger is better.

When a male lion meets another lion, he does what researchers call a “lion strut.” He raises his body as high as possible on stiffly stretched legs, tucks his chin into his chest, and arches his black-tufted tail high in the air over his back. Along with his mane, the strut makes him look more threatening.

In a fight with another male over females or territory, a lion's mane also comes in handy as a neck protector. The dense mat of hair absorbs blows as the lions whack each other with their front paws. Sometimes one lion's claws get caught in the other's mane, leaving him tangled and vulnerable.

One of the signs of a strong and healthy lion is a mane that is in good shape. “The condition of the mane reflects the condition of the lion,” says Karyl Whitman, a biologist who studies lions in the wild. “If a lion is seriously injured, he will sometimes lose his mane entirely.”

Some scientists think that big manes make male lions more attractive to females. “A healthy mane indicates that a lion is probably a good protector and will help provide for the females and their cubs,” Whitman explains.

But while manes may be useful for impressing the lionesses, they can be a major disadvantage to the males when it comes to hunting. All that fluff makes it difficult to sneak up on prey. In a pride, or group, lionesses do most of the hunting.

A lion's mane usually gets darker as he gets older. A big, dark mane on a resident lion (a male that protects a lion pride) makes him very visible from a distance. Nomad lions (wandering males without a pride) can probably spot a resident lion in time to avoid his territory – and a battle. "Lions don't fight unless they have to," says Whitman. Just as a lion's strut can avoid an all-out fight, visibility also helps keep pace in the kingdom.

Now you know one way a lion maintains power: He makes sure that no day is a bad hair day!

(Sunquist, 2001, pp.12-18)

Word count: 430

Time: 4.5minutes

reading speed: 96 wpm

% miscues (*self-corrected and uncorrected*): $20 / 430 = 4.7\%$

% substitutions: $4 / 430 = 0.9\%$

% nonsense substitutions: $1 / 4 = 25\%$

% omissions: $3 / 430 = 0.7\%$

additions: 4

% ignored full-stops: 0

added full-stops: 0

of "re-reads" = 11

In Praise of Trees

Have you ever thought of a tree as being a good friend? A tree can give us much in the way of shelter, warmth, fun, and even learning. We also look for these things in our friends. Read further to see how a tree provides all these things.

When a tree is first planted, its growth is rapid. Over months and years the trunk will become thicker. Branches and limbs will sprout from the trunk. Birds use these branches for their nests. This is where their young first learn about the world. Squirrels also call a tree home. They can be seen scurrying up a trunk storing acorns for the winter.

We can also learn about the seasons from a tree. With spring's arrival, many trees are adorned with beautiful blossoms. Crab, cherry, apple, and lilac trees all have colourful blossoms. Lush green leaves of summer show vibrant colours during the fall. In the winter, trees with bare limbs stretch up to the gray sky.

The trunk of a tree is a great place to lean back and enjoy a good book. Or, if you want to do some climbing, the branches of a tree provide a ladder to the sky. On a warm day, the grand leaves of an oak offer pleasant shade. Sometimes the leaves of a tree act like an umbrella to protect you during a rainstorm.

Dead branches are good fuel for a roaring evening campfire. Many people are thankful for the needed warmth that wood from the forests provides them during the cold winter months. In years past, burning wood for fuel was the standard way to heat homes.

Trees provide lumber that builds many items. Houses are made with lumber from various types of trees. Many buildings contain some type of wood in their structures. Wood is used as decoration both inside and outside. Wood is used to build items we use for recreation. Most picnic

tables and rowboats are built with wood. Objects can be carved from small blocks of wood.

Craftsmen make detailed furniture from wood.

Trees fill countless needs in our daily lives. They give us pleasure. Their colourful leaves in fall are beautiful. They provide necessities. Paper we write on comes from trees.

To protect trees as a natural resource, we must plant new trees each year. New trees will replace the ones we cut down. Care must be taken to help them thrive.

(Spargo, 1989)

408 words

reading speed: 91 wpm

% miscues (*self-corrected and uncorrected*): $13/408 = 3.2\%$

% substitutions: $3/408 = 0.7\%$

% nonsense substitutions: 0

% omissions: $2/408 = 0.5\%$

additions: 2

% ignored full-stops: 0

added full-stops: 0

of re-read words/phrases: 12

Digging In!

SAN ANTONIO ZOO, TEXAS

A fierce-looking warthog terrified his keepers. Every time they opened his exhibit door, the hog would charge. That's how he got his name--Diablo (Spanish for "devil").

But the omery oinker wasn't really mean, says animal behaviorist Tim Desmond. He was bored. To prove it, Desmond had the keepers use food rewards to train Diablo to go inside his barn and let his keeper close the door.

While Diablo was locked up inside, Desmond buried turnips and sweet potatoes in the warthog's outdoor area. When Diablo returned, he sniffed the ground and began racing around like a little kid on an Easter egg hunt.

"He was so happy!" says Desmond. "He kept jumping up and down and kicking his heels."

Which just goes to show: Let a bored boar root for his food and the devilish demon disappears.

Taking the Plunge

CENTRAL PARK ZOO, NEW YORK CITY

Treats were frozen inside three balls of ice that curator Don Moore gave the polar bears one day. Fish was inside two balls; the third had chicken, the bears' favorite. One polar bear, Ida, grabbed the chicken ball and jumped into the pool. Smart move! Why? Because Lily, the other polar bear, hates getting wet. So she's stuck with fish. Or is she? Clever Lily, standing on her hind legs at the water's edge, tossed a fish ball into the water. Intrigued, Ida left her ball and swam toward Lily's. That's when Lily made her move: She dived in, snatched the prized chicken, and paddled to shore. When it came to getting chicken, Lily didn't chicken out after all.

(Newman, 2002, pp.12-17).

Word count: 257

Time: 3:00

reading speed: 86 wpm

% miscues (*self-corrected and uncorrected*): $10 / 257 = 3.9\%$

% substitutions: $4 / 257 = 1.5\%$

% nonsense substitutions: 0

% omissions: 0

additions: 2

% ignored full-stops: 0

added full-stops: 0

of words/phrases re-read = 12

A Small Country

Andorra, one of the smallest countries in the world, is located high in the mountains between France and Spain. The country covers only 179 square miles. That is less than half the size of New York City. About 43,000 people live in Andorra.

High, rocky mountains surround Andorra. Until the 1930s, travellers had difficulty reaching the country. Up until that time, people in Andorra lived the way they had lived for centuries. Most Andorrans worked as farmers or as shepherds. Things did not change quickly.

When roads were built from France and Spain to Andorra in the 1930s, life picked up speed. Tourists began to visit the small country. These tourists brought in a lot of money to spend while visiting. Many people in Andorra found new jobs in shops or hotels. These changes helped to keep young people in Andorra. There were many more jobs than before the roads were built.

Today tourists provide 80 to 90 percent of Andorra's income. More than a million people visit each year. They come to view the rugged mountains. They enjoy the quiet way of life. Most people are also interested in the ancient buildings. There are many shops for tourists to browse in. Clothes, watches, jewelry, wines, and other items are sold at low prices in Andorra. Import fees are low, so tourists enjoy the inexpensive shopping.

Most of the businesses in Andorra are owned by its citizens. There are not many foreign businesses. Some Andorrans still farm and graze sheep and cattle. But most are now involved with the tourist trade.

Andorra has an unusual legal system. It is based on ancient laws and rules. The country is ruled by a Spanish bishop and the president of France. They are called the "princes of Andorra." They have equal power and must agree before any change can be made in Andorra. The two

rulers have been paid for their services in the same way for centuries. Every two years, the bishop of Spain receives 6 hams, 6 cheeses, 12 hens, and 8 dollars. The president of France is paid 2 dollars every other year.

As well as having two rulers, Andorra has two sets of public services. There are two postal services. One is French and one is Spanish. There are two school systems as well. People in Andorra speak French and Spanish. But their official language is called Catalan.

(Spargo, 1989)

402 words

reading speed: 122 wpm

% miscues (*self-corrected and uncorrected*): $22/402 = 5.5\%$

% substitutions: $10/402 = 2.5\%$

% nonsense substitutions: $2/10 = 20\%$

% omissions: $4/402 = 1.0\%$

additions: 2

% ignored full-stops: 0

added full-stops: 1

words/phrases re-read: 8

Lexile Search Tip

Some databases may include *Lexile Rankings* in citation information. The Lexile Rankings assigned to a result give an educator an estimate of the reading difficulty of the result, and the approximate grade level reading ability required for comprehension. The grade level does not necessarily reflect the student's actual grade. The relationship between grades and Lexile Rankings are seen here:

Grade 1	Lexile Ranking	200-350
Grade 2	Lexile Ranking	350-500
Grade 3	Lexile Ranking	500-750
Grade 4	Lexile Range	620-910
Grade 5	Lexile Range	730- 960
Grade 6	Lexile Range	800-1030
Grade 7	Lexile Range	880-1090
Grade 8	Lexile Range	910-1140
Grade 9	Lexile Range	1030-1160
Grade 10	Lexile Range	1080-1210
Grade 11	Lexile Range	1130-1260
Grade 12	Lexile Range	1180-1300

For more information about the Lexile Framework, visit the MetaMetrics website at www.lexile.com.

Analysis of Running Record for Joel

	July 3	July 16	Aug 5	Aug 11	Aug 15	Sept 12	Sept 19	Sept 26	8 Oct
Word Count	406	414	410	399	403	390	402	398	408
Time	4:30s	5:30s	4:10s	4:30s	4:20s	4:45s	4:20s	4:00s	4:30s
Words per minute	90wpm	75wpm	98wpm	89wpm	93wpm	87wpm	93wpm	100wpm	91wpm
% Miscues (self-corrected and non self-corrected)	4.2%	5.3%	5.6%	4.5%	3.2%	3.0%	3.0%	2.3%	3.2%
% Substitutions	2.0%	1.7%	1.0%	1.0%	0%	0.3%	1.2%	0.3%	0.7%
% Nonsense Substitutions**	87.5%	0%	25%	25%	0%	0%	20%	0	0
% Omissions	0.5%	0.5%	0.7%	0.8%	0.2%	0.5%	0.2%	0.5%	0.5%
# Additions	1	3	1	1	1	0	2	0	2
% Ignored Full-stops	0%	2.1%	2.9%	2.6%	0%	2.9%	0	0	0
# Added Full-stops	0	0	1	0	0	1	0	0	0
Improvement with re-reading?		92wpm -less rereading -most m/c self-correct	102 wpm - as much rereading -- fewer m/c	133wpm	115wpm -very little re-reading -fewer miscues		179wpm -very little re-reading -only 2 miscues	Silent previewing used.	Silent previewing used.
Comprehension Accuracy	100%	90%	100%	100%	100%	90%	100%	80%	90%

* This category includes all miscues: substitutions, omissions, and additions, but does not include re-reading a word or phrase initially read correctly.

** This category does not include substitutions made for names.

Readings from July 3 to August 15 had all fullstops highlighted in red to remind Joel to stop. From September 12 on, he was not using this reminder.

Analysis of Running Record for Craig

	June 25	July 3	July 8	July 15	Sept 15	Sept 23	Oct 1	Oct 6	Oct 8	Oct 22
Word Count	967	406	414	410	399	403	390	257	402	398
Time	Not recorded	3:30s	3:30s	2:30s	4:10	5:15	4:00	3:00	3:20	5:00
Words per minute	n/a	116wpm	118 wpm	164wpm	95wpm	77wpm	98wpm	86wpm	122wpm	80wpm
% Miscues* (self-corrected and uncorrected)	5.3%	4.7%	7.5%	3.9%	5.7%	6.5%	3.3%	3.9%	5.5%	4.0%
% Substitutions	2.9%	1.7%	3.9%	0.7%	1.8%	4.2%	1.5%	1.5%	2.5%	1.8%
% Nonsense Substitutions	64%	29%	11%	67%	57%	24%	17%	0%	20%	38%
% Omissions	0.6%	0.7%	1.2%	0.2%	2.0%	0.2%	0%	0%	1.0%	0.5%
# Additions	6	0	5	0	3	0	1	2	2	3
% Ignored Full-stops	4%	2.4%	0%	5.7%	0	2.6%	0%	0%	0%	0%
# Added Full-stops	3	1	0	1	1	1	1	0	1	0
Improvement with re-reading?			Definite improvement: 0% nonsense substitution	Little improvement. Re-reading done next day. C rushed and said it was boring to re-read it.	Definite improvement in speed (121wpm) and accuracy; 0% nonsense substitution	90wpm No real gain in speed, lots of re-reading. Low nonsense substitution rate. Transition?	Began using silent previewing – reading speed up – continued low nonsense substitution rate	Re-reading behaviour: 12 instances	Silent previewing – reading speed up – continued lower nonsense substitution rate	Silent previewing-reading speed low, nonsense substitutions higher, phrasing perfect
Comprehension Accuracy		100%	90%	100%	100%	90%	100%	Authentic text	90%	

* This category includes all miscues: substitutions, omissions, and additions, but does not include re-reading a word or phrase initially read correctly.

** This category does not include substitutions made for names.

-Readings from July 3 to August 15 had all fullstops highlighted in red to remind C to stop. From September 23 on, he was not using this reminder