Exploring Fluency as Part of Early Reading Processing:

A Study of the Oral Reading of Grade One Students

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A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of Manitoba in partial fulfillment of the requirement of the degree

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Abstract

Despite over 30 years of research linking fluency to comprehension, questions remain regarding the nature of fluency and how it contributes to early reading development. This study sought clearer understanding of aspects of fluency found in the oral reading of grade 1 students and considered how they interact with other aspects of developmental reading. Research questions were: (1) What aspects of fluency are observable in the oral reading of grade one students? (2) What evidence of early reading processing is observable in the oral reading of grade 1 students?, and (3) How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development? Grade one children (n=6) each read orally 3 familiar stories. Analysis of audio-tapes revealed that rate, accuracy, and elements of prosody all contributed to fluency. Running records (Clay, 2002) of individual reading showed that each child was developing a unique reading process. A rich description of elements of fluency along with developing aspects of individual reading processes showed that it is possible, and indeed critical, to consider fluency and processing together.

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CHAPTER I

Introduction

Clay (1991) describes *meaning* as " 'the given' in all reading—the source of anticipation, the guide to being on track, and the outcome and reward of the effort" (p. 1-2). Kuhn and Schwanenflugel (2006) state that "comprehension is the ultimate goal of reading" and that "the end goal of all literacy instruction is creating students who are able, and who want, to comprehend challenging material while reading independently, both for pleasure and for specific purposes" (p. 14-15). According to Snow, Burns, and Griffin (1998), "reading as a cognitive and psycholinguistic activity requires the use of form (the written code) to obtain meaning (the message to be understood), within the context of the reader's purpose (for learning, for enjoyment, for insight)" (p. 33).

While it is commonly accepted in the literature that gaining meaning from, or comprehending the text, is the underlying goal of reading instruction, differences in opinion still exist regarding how best to teach students to read for meaning. Research in the past 20 years, however, has been informative in suggesting the role played by reading fluency in accessing the meaning of text. Allington (1983) tentatively stated that "oral reading fluency does seem at least indirectly related to silent reading comprehension" (p. 559). The following recent definition of fluency by Pikulski and Chard (2005) reflects years of fluency research and clearly suggests the important link between fluency and comprehension:

> Reading fluency refers to rapid, efficient, accurate word recognition skills that permit a reader to construct the meaning of text. Fluency is also manifested in

> accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension. (p. 511)

The National Reading Panel Summary Report (2000) plainly establishes fluent reading as one of the essentials for comprehension and lack of fluency as a detriment to understanding the author's message, stating that "if text is read in a laborious and inefficient manner, it will be difficult for the child to remember what has been read and to relate the ideas expressed in the text to his or her background knowledge" (p. 11).

It appears from the attention devoted to fluency in recent reading research that it is indeed an area worthy of further study, a "hot topic", as described by Samuels and Farstrup (2006, p.1). Raskinski, Blachowicz, and Lems (2006) claim that interest in fluency lagged in educational research until recent definitions of the term began to connect fluency with reading comprehension. These authors believe that currently, "reading fluency has taken its place with phonemic awareness, word decoding, vocabulary, and comprehension as critical components of effective reading instruction" (p. 1). This stance is echoed by Samuels and Farstrup (2006) as they applaud the recent resurgence of interest in fluency as a critical aspect of literacy learning.

While educational researchers agree that fluency plays a key role in constructing meaning from text, they differ in their views on how fluency is achieved. Over the past thirty years a large body of research has attempted to explain how successful readers bring meaning to the words of authors and how reading with fluency plays into this process. In their seminal work, LaBerge and Samuels (1974) describe how a proficient reader projects him/ herself into the setting of the story, oblivious to any decoding efforts that "have been transforming marks on the page into the deeper systems of

comprehension" (p.314). Similarly, Rumelhart (1994) states that reading "begins with a flutter of patterns on the retina and ends (when successful) with a definite idea about the author's intended message" (p. 864).

Many researchers have suggested a strong connection between quick effortless word recognition and the deeper comprehension identified by LaBerge and Samuels, as well as Rumelhart. Stanovich (1980) states, "it is now reasonably well established that context-free recognition speed is a major determinant of individual differences in reading fluency" (p. 61). Dowhower (1991), on the other hand, sets forth prosody, or reading with expression, as an essential element of skilled reading. The Report of the National Center for Education Statistics (1995) considers not only rate and accuracy, but the ability to read in meaningful phrases as markers of fluency, and has in large part been responsible for focusing the attention of researchers, media and policy makers on fluent reading and on its opposite phenomenon, dysfluency.

A good deal of research has been devoted to describing the hallmarks of fluent reading. Historically research appears to have fallen into two general categories, that which characterizes fluent reading by rate and accuracy, and that which emphasizes the elements of prosody (the more rhythmic, melodic aspects of language). Recently Pikulski and Chard (2005) have suggested that fluency encompasses more than either of these aspects and that searching for a deeper construct is key to our understanding of successful reading.

Having listened to and analyzed the reading of many grade one students, I suspect that speed, accuracy and prosody probably all interact in the development of fluent reading, but believe that there may be a missing piece in our understanding of fluency. It

could be that this "deeper construct" of fluency could be achieved through a clearer understanding of the way that these elements interact in reading processes.

Observations of Grade One Readers

My personal interest in fluency stems from the many opportunities I have had to observe the oral reading of grade one students within the context of Reading Recovery™ lessons. Reading Recovery™, as defined by the Reading Recovery Council of North America (2002), is a short-term (12-20 weeks) early intervention that helps the lowest-achieving first-grade children develop effective strategies for reading and writing and reach grade level. As a Reading Recovery™ Teacher Leader I regularly visit schools to observe lessons and provide support and guidance as Reading Recovery™ teachers work individually with students.

The daily Reading Recovery™ lesson affords two major opportunities for the teacher to hear and record observations of the oral reading of the child. The bulk of the reading during the lesson occurs in short story books specially chosen to match the present capabilities of the particular student. The use of meaningful, engaging stories allows the teacher and child to keep meaning at the forefront. The reading is carried out aloud because this offers a unique window of opportunity for the teacher to hear and record the work being done by the child as knowledge about reading is applied to the processing of text. Clay (2005) identifies two major aims of the book-reading portions of the lesson. One is the re-reading of recently seen books that allows the child to "orchestrate" all of the reading behaviors and strategies within his/ her repertoire. The other is for the child to use those behaviors and strategies in reading new books that have not previously been attempted.

As I have observed and listened to the sound of the children's oral reading in these lessons, I have noticed a wide range of reading behavior. Children who are making slow progress often exhibit labored, choppy, word-by-word reading. They concentrate so intently on the solving of each consecutive word that not only the meaning of the passage but also the sheer enjoyment of reading is lost. They balk at difficulty, seemingly unable to pull up the necessary resources to make attempts at new or difficult words. They sometimes forge ahead in spite of errors that compromise the meaning of the text.

Many other children, however, read in a fashion that more closely resembles the flow of oral language. They read more quickly and smoothly, group words together in phrases, use expression, stress key words, and notice punctuation. These children appear to be enjoying and deriving meaning from even the simplest of stories. They comment on the books as they read, and notice when something they have read does not make sense. They are developing ways to solve difficult or new words and appear to be propelled forward by their own control over the process. Furthermore it appears that the children who are able to read in a manner akin to the flow of oral language on familiar texts are also able to meet the challenges of new text with greater success. Conversely, students who read in a halting disjointed fashion seem to be more poorly equipped to reach out to new material. These observations have led me to believe that there is an important link between fluency and successful reading of both familiar and new text, and that lack of fluency is connected with less successful reading.

Current Fluency Instruction

Reading Recovery™ teachers are guided in their teaching by the theory and procedures designed by Clay (2006), and participate in regular professional development

sessions with opportunities to discuss implications and aspects of fluent reading. Classroom teachers are not afforded these intense professional development opportunities and must often rely upon and select from an increasing variety of literature and commercial material on fluency instruction.

Current literature describes a variety of classroom practices and commercial programs that claim success in addressing students' lack of fluency. Kuhn and Schwanenflugel (2006) provide a description of a range of methods that are commonly in use at the present time. They differentiate between developmental approaches that are effective with an entire class as readers are making the transition to fluency, usually in second grade, and supplemental approaches that come into place in later years when students have failed to develop as fluent readers. The following sections provide a brief description of some of the methods described by these authors.

Repeated Reading

Repeated reading is a method in which the student initially reads a selected passage to the teacher, who times the reading and records errors. After several opportunities to practise the text independently, the student is again timed and errors are coded, with the aim of reading at approximately 100 words per minute, with no more than two miscues per 100 words. This method is based on the theory that increased automaticity in word reading leads to fluency, which in turn leads to comprehension.

Reading While Listening

In this method, children listen to and read orally along with audio-tapes until they have achieved a fluent production of the text. This provides a model for fluent reading as well as the scaffolding needed for the child to read more challenging words in the text.

This is based on earlier research showing that with continued and simultaneous hearing and practising of the text, children are able to read in a manner that closely resembles the flow of oral language. Samuels (2006) includes computer-based programs in this category.

Paired Repeated Readings

In this method, devised by Koskinen & Blum (1986), each student selects his/her own short passage, reads it to a partner, and self-evaluates the sound of the reading. On the second and third oral readings, the partner listens and comments on improvements. Roles are then switched and evaluative feedback is provided to the other partner. This has mainly been used with third grade and older students.

Fluency-Oriented Reading Instruction

Originally devised in response to a district mandate that all students read from grade level material regardless of their reading ability, this method consists of specific, daily, whole-group activities with one selected text. Within a period of one week, all children hear a fluent rendering of the text by the teacher, discuss the story, echo read with the teacher, choral read with the teacher, read with a partner, and take the passage home for additional practice. In addition to these methods, Kuhn and Stahl (2003) describe *assisted or choral reading* in which the teacher and student sit side by side, sharing the same book and reading orally together with the teacher reading into the child's ear and controlling the reading speed by sliding a finger under the words. They state that this method traces back to an earlier study by Heckelman (1969) who believed that it was possible to neurologically impress words into the child's brain. Similarly, Rasinski and Hoffman (2003) describe *paired reading* where a less fluent and more fluent

student sit side by side, reading together with the more fluent reader adjusting his/her pace to that of the less fluent reader.

In *shared reading,* according to Rasinski and Hoffman (2003), the teacher introduces, reads, and discusses a book with the class and provides follow-up opportunities for students to practise reading the book orally in partners or small groups. *Oral recitation lessons and fluency development lessons* provide similar instruction using a basal text.

Samuels (2006) describes other methods of group fluency instruction aimed at developing fluency through enjoyable, meaningful class activities such as readers' theatre, radio reading, and choral reading. As well, Hudson, Lane and Pullen (2005) provide a description of a number of commercial classroom programs and resources currently available for developing fluency. There appear to be a growing number of systematic, commercially packaged methods for routinely addressing fluency, many of which are based on the repeated practice of words in isolation with the end goal of achieving automaticity. Kuhn and Schwanenflugel (2006) warn that not all practices and methods are equal in their effectiveness and that it is imperative for teachers to listen to and evaluate the oral reading of their students in order to determine the best course for fluency instruction.

Problems in Teaching for Fluency

In spite of the variety of available resources and commercial programs, Rasinski (2006) believes that through no fault of their own, teachers of reading are still working without a clear concept of reading fluency and without knowledge of how to incorporate fluency instruction into their classroom programs (p. 2).

In 1983 Allington (1983) referred to fluency as "the neglected reading goal". Over the years, this may have been interpreted to mean that fluency occurs only as an end result of successful reading. Teachers' attitudes toward fluency instruction are informed by curriculum documents, publishers' manuals, and commercial products suggesting that fluency is a stage or end goal to be reached by successful readers. According to Snow and Griffin (1998), few published first grade reading programs emphasize fluency in reading in spite of recognizing the importance of comprehension. Speece and Ritchey (2005) point to the tendency of researchers to focus on fluency at third grade or higher, and to the "lack of sustained empirical attention to oral reading fluency in young children" (p. 387).

Additionally, it may be difficult for teachers to interpret the reading theories underlying the writing of commercial materials, many of which are based on a sequential concept of the reading process. For example, some theorists have suggested that children must pass through set stages enroute to fluent reading. In Chall's (1996) model, a child must pass through several stages before becoming fluent, including the beginning of attention to print, and the development of decoding ability and automaticity. Kame'enui and Simmons (2001) state that "fluent reading is plainly developmental and represents an outcome of well-specified sublexical and lexical processes and skills developed for most children over a bounded period of pedagogical time" (p. 204). Samuels (2006) states that from the standpoint of cognitive psychologists, "at the beginning stage of reading, only one skill could be done at a time; first decoding, followed by comprehension" (p. 39-40). If fluency is regarded by teachers as an outcome of successful reading, it is not surprising if they overlook its importance in the beginning stages. Pressley, Gaskins and Fingeret (2006) state that "there is no magical moment when fluency is achieved once and for all"

(p. 47). Taken in context, this statement implies that fluency is achieved in stages, starting with word-by-word reading. However the statement also might imply that we can be searching for signs of fluency at all stages of the reading process.

A third problem with teaching students to be fluent may be that detecting and describing the signs of fluency is very difficult for teachers. Kame'enui & Simmons (2001) state eloquently that

> fluent reading, like the "thread of life" itself (Kendrew, 1966), is intrinsically elegant in both form and cadence (and perhaps biochemical valence). We certainly know it when we see it, and we are quick to celebrate it, along with the trajectory of success it portends... Likewise, we readily recognize when reading is not fluent, but is wickedly fractured and laborious in flow and purpose, when words misfire and do not enjoy a private voice or public audience". (p. 203-204)

While distinguishing between fluent and non-fluent reading is relatively easy even to an untrained ear, it is the nuances and subtleties of oral reading that are more difficult to capture. As a result of difficulty in detecting signs of fluency, teachers may be reluctant to teach children to read in a more fluent manner while the reading process is unfolding, and may tend to wait for fluency to arise eventually from multiple, successful reading experiences.

The deeper, more underlying problem, I believe, is that some teachers may be working without a clear understanding of the complexities of the reading process, and without this understanding, fluency instruction could become shallow and routinized. Mathson, Allington, and Solic (2006) state that

> we must arm our teachers with expert training on the components of reading fluency, as well as on how these components are linked to other elements of reading, such as comprehension. With this training, teachers will be able to make informed decisions regarding instruction and will have the capacity of assessing students using their own judgment rather than that of a test publisher. (p. 116)

Allington (2006) contends that fluency is "still waiting after all these years" (p. 94). Samuels and Farstrup (2006), however, optimistically note the rekindling of interest in fluency as a significant aspect of literacy learning. They state that "with the newborn importance of reading fluency has come two important problems: how one defines fluency and how one assesses it" (p. 2). In concluding his historical examination of fluency, Rasinski (2006) says that while the link between fluency and comprehension has been established, "our understanding of reading fluency and its place in the reading process and reading curriculum is far from complete" (p. 18). He suggests the need for further research on describing the "full complement of characteristics that define fluency" (p. 19). Kame'enui & Simmons (2001) contend that "reading fluency as a construct does not enjoy definitional, theoretical, empirical, or instructional consensus in the research literature" (p. 204). Therefore, the following study addresses issues of fluency that extend what is currently known.

Purpose of the Study

The purpose of this study is to provide further insight into the concept of fluency as part of early reading processes. It begins with Pikulski and Chard's (2005) concept of fluency but provides a description of the reading of grade one children that embeds fluency within other aspects of a child's growing control over reading.

Briggs and Forbes (2002) believe that fluency is not only the outcome of competent reading but also contributes to the development of reading competency from the beginning. Statements such as this serve as a catalyst for a slightly different examination of the role of fluency in beginning reading. This particular study considers past and present concepts of fluency, but bears in mind Briggs and Forbes' contention that "phrasing in fluent reading plays a significant role as part of the process and should be addressed early in a child's reading development" (p. 9). Data derived from this qualitative study suggests that fluency is observable as an integral part of children's reading processes, and as such, is a critical, teachable aspect of early literacy.

This descriptive study presents an expanded, clearer understanding of aspects of fluency found in the oral reading of grade one students and considers how these aspects of fluency may interact with developing reading processes. Historical conceptualizations of fluency were examined with a view to providing a basis for extending the present understanding of the part fluency plays in the process of learning to read.

Aspects of fluency and evidence of reading processes in the oral reading of six grade one students in one classroom were examined. Results suggest that our understanding of fluent reading must encompass, but move beyond rate, accuracy and prosody, and that a description of fluency is incomplete without considering each child's developing reading process. The study was designed to provide a different perspective from which to view fluency, seeing it not only as an outcome of successful reading, but as an integral part of each child's complex reading development.

Context of the Study

While my initial observations were carried out within the context of Reading Recovery™ lessons, it is my belief that fluency and lack of fluency are not exclusive to the oral reading of students in that setting. I have observed grade one classrooms during periods of independent reading and have noticed a wide range of read-aloud styles, from the laborious pointing and monotonous production of each word to the transformation of the author's words into drama. It is in the classroom setting that my study of oral reading took place.

One reason for selecting the classroom setting was that a random selection of six children from one class allowed for observation of a variety of reading processing systems. According to Clay (1991), oral reading both supports and facilitates the child's mental processing and "remains important as the only situation the teacher can use to observe, check and reinforce appropriate reading behavior in the first few years" (p.251). Kaye's (2006) study of the oral reading of 21 proficient grade two readers revealed more than 2500 text reading behaviors. Similarly, listening to the oral reading of a variety of grade one children in this study provided a wealth of information on early reading.

A second reason for choosing the classroom setting for this study was that an end goal of a series of Reading Recovery™ lessons is to return the child to the classroom, able to continue learning along with the other children without further specialist help. Studying the reading of a variety of children in the classroom provided additional insight into the milieu into which the Reading Recovery™ students re-enter.

The study was conducted in a grade one classroom situated within one school in a suburban school division, in May of the year, after the children had benefited from approximately eight months of reading instruction.

Research Questions

Fluency has enjoyed a resurgence of interest over the past thirty years and presently remains at the forefront of educational research. It currently appears as a "very hot topic" on the 2007 International Reading Association's "What's Hot, What's Not for 2007" list, compiled from an annual survey of educational leaders (Cassidy & Cassidy, 2007). Many notable and highly respected theorists and researchers (Allington, Clay & Imlach, Dowhower, LaBerge & Samuels, Rasinski, Schreiber, and Stanovich) have attempted to describe the essence of this very abstract concept. Such definitions link strongly to particular theories of the reading process. Definitions and concepts of fluency have historically fallen into two rather distinct categories: (1) those describing fluency in terms of rate and automaticity, and (2) those contending that prosody is the hallmark of fluent reading. While comprehension has always been in some way connected with fluency in the minds of researchers and theorists, it is becoming increasingly common to see the two linked in definition.

It is my contention, however, that in spite of a refined understanding of fluency, educators in the field are still unconvinced of the existence and significance of fluency in early reading development. Teachers have at hand an abundance of research, writing, and commercial programs on fluency instruction, but may not have the understanding of reading theory to make informed choices regarding instructional methods. Some may still be working with the idea that fluency is an end goal and not something that can be

observed and taught almost from the beginning of literacy learning. Current definitions and concepts are still not helping teachers to understand the place of fluency in early reading. Hiebert and Fisher (2006) point to the shortage of available research on fluency as it relates to the oral reading of grade one students as a subject worthy of attention that would help turn the spotlight on early reading development.

I believe that teachers need to work with a concept in which fluency is not only an indicator of a healthy, well-developed reading process, but in which fluency is integrated with and contributes to effective reading right from the start. There is no shortage of literature on methods of fluency instruction but teachers need to understand the concept itself before using these methods in an effective way.

This study analyzed the reading of six students from a single grade one classroom setting, employing two tools that could be readily available to all teachers of early readers: Clay's (2002) Running Records and a teacher's trained ear. The data was analyzed and interpreted in keeping with descriptive qualitative research methodology (Bogdan & Knopp Biklen, 2003) bearing in mind what is possible, on a smaller scale, for practising teachers.

In order to frame this investigation regarding aspects of fluent reading observable in beginning readers and work toward a clearer understanding of the concept of fluency, the study was guided by the following questions:

1).What aspects of fluency are observable in the oral reading of grade one students?

2).What evidence of early reading processing is observable in the oral reading of grade one students?

3). How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development?

Significance of the Study

Every day in schools beginning readers continue to practise and perpetuate habits and styles of reading. Stanovich's (1986) analogy of "the rich getting richer" is played out in any classroom, small group, or individual learning setting where children are learning to read. Fluent successful readers continue to enjoy, comprehend, and seek out an ever-increasing variety of texts while slower, less successful readers continue to derive little meaning or satisfaction from their efforts. In order to help all early readers enjoy and derive meaning from texts, it is my belief that teachers need to work with a clearer understanding of the factors that contribute to successful reading. Teachers must become keener observers of the wide range of behaviors demonstrated by both successful and less successful readers. Fluency must be seen not just as an outcome of good reading but as an integral part of a dynamic and changing process.

This study is significant because it provides insight into helping teachers to think more deeply about the implications of what they observe in the oral reading of children. In capturing a variety of oral reading behaviors, the study offers a more global view of what grade one readers do. Fluency is regarded as a force that is interwoven with and that lends power to beginning readers as they attempt to interact with text. Briggs and Forbes (2002) maintain that "it is only when we look at reading as a complex process that we begin to understand the role that phrased and fluent reading plays in building an effective

system" (p. 1). An underlying strength of this particular study lies is its theoretical view of reading as a complex process characterized by many observable aspects of fluency.

This study searches for a clearer way to demonstrate the place of fluency in early reading processing systems. A view of fluency that encompasses but moves beyond speed, accuracy and prosody provides a basis for further discussion and research. It is hoped that the findings will have direct implications for teachers in helping all children continue to learn from their beginning efforts in reading.

Scope and Limitations of the Study

Reading is a complex perceptual and cognitive process in which the reader uses his/her available resources in flexible ways as s/he interacts with text to comprehend the author's message (Clay, 1991; Rumelhart, 1994; Singer, 1994). While years of research have contributed much to the understanding of this complex process, one researcher, Clay (2001), stated that she "still lives in a perpetual state of enquiry", maintaining an ever-tentative stance in drawing conclusions. This cautious position is assumed in making implications from the findings of the present study. This small qualitative research study cannot definitively demonstrate the place of fluency within the reading process. It makes it possible, however, to examine in detail aspects of fluency in the participants' reading that may contribute to and interact with other observable aspects of their reading. The study provides a snapshot of each child's fluency and active reading processing system at one moment in time.

A possible argument is that in this study, the children's understanding of the text was not measured by a comprehension test score, but, rather was inferred from audio-tapes and running records of oral reading. Hudson et al (2005) believe that, "it is clear

that the amount of correct expression indicates to a trained ear how much the reader comprehended the text" (p. 705). The ways in which the children in this study put words together, stressed particular words, modulated their voices, and attended to punctuation, provided clues about their understanding of the text.

The validity of this study may be questioned because it did not employ strictly quantitative means to measure such prosodical elements as words stressed, length of pauses, and length of phrases. Instead it relied on the researcher's analysis and subjective interpretation of evidence from audio-taped recordings and running records (Clay 2003), and their verification by another trained Reading Recovery Teacher Leader. The intent was to use methods of observation that are possible for any teacher to employ.

A limitation of this study may be that it does not seek to evaluate present methods of fluency instruction. Clay (1991) says that researchers, teachers, schools and school systems continually seek out and align themselves with sequences of instruction that provide particular opportunities, and inevitably exclude other opportunities for children to learn. Literature on fluency demonstrates this point as the underlying debate continues between whole language and systematic phonics instruction. The focus of this study remains on the learning of the child, rather than on evaluating instructional practices.

The study explores fluency as part of early reading processing. Processing, as defined by Clay (2001), "refers to getting access to and working with several different types of information to arrive at a decision" (p. 80). It can be inferred that each child will acquire that access to print in a slightly different way. This study examines aspects of fluency along with the unique ways in which each child is developing an early reading

processing system. In this way, attention remains squarely on each child as a reader, rather than upon the text itself.

In the ongoing milieu of debate, small research studies such as this can provide further insight into the interplay of various aspects of children's reading. Increased understanding of fluency and its place in reading development will enable teachers to make more informed decisions about methods of instruction. Schwartz (2005) believes that close observation of the oral reading of students could potentially move the teaching profession past the ongoing debate on the most effective ways to teach children to read.

Definitions

Comprehension: As described by Samuels (2006), who states that in the process of comprehension "the reader actually takes the information that is on the page and combines that information with prior knowledge, and, in so doing, constructs a meaningful understanding of the text" (p. 34-35).

Decoding: According to Samuels (2006) this "simply means the ability to generate a phonological-or sound-representation of each printed word on the page" (p. 34).

Fluency or fluent reading: As defined by Pikulski and Chard (2005), refers to "rapid, efficient, effective word-recognition skills that permit a reader to construct the meaning of text. Fluency is manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible silent reading comprehension" (p.511).

Guided reading: As defined by Fountas and Pinnell (1996), is "a context in which a teacher supports each reader's development of effective strategies for processing novel texts at increasingly challenging levels of difficulty. The teacher works with a small group of children who use similar reading processes and are able to read similar levels of text with support" (p. 2).

Leveled books: As defined by Fountas & Pinnell (1999), leveled books are "books that have been analyzed in terms of how they support and challenge young readers as they learn how to read and that have been organized in a gradient of difficulty" (p.7).

Processing: As defined by Clay (2001), "refers to getting access to and working with several different types of information to arrive at a decision" (p. 80).

Prosody According to Hudson et al (2005) is "a linguistic term to describe the rhythmic and tonal aspects of speech: the "music" of oral language" (p. 704).

Reading; As defined by Clay (1991) is a "message-getting, problem-solving activity which increases in power and flexibility the more it is practised" (p. 6).

Reading Behavior: According to Clay (2002), is everything the child says and does during the reading of text, including "when the reading is correct, what his/her hands and eyes were doing, the comments s/he made, when he repeated a line of text, and so on" (p. 53).

Reading Recovery™: As defined by the Reading Recovery Council of North America (2002) is a short-term (12-20 weeks) early intervention that helps the lowest-achieving first-grade children to develop effective strategies for reading and writing and reach grade level.

Reading Recovery™ Teacher Leader refers to a person who has received year-long intensive training in the reading and writing process and implementation of the Reading Recovery™ program as conceptualized through the research and theory of Clay (1991,

1993). The Teacher Leader provides training to new Reading Recovery™ teachers and ongoing professional development to previously trained teachers working in the field.

Running Record: As designed and described by Clay (2002) is "one systematic procedure for recording reading behaviours observed during text reading, a tool for recording and then interpreting how children work on texts" (p. 45).

Syntax: according to Clay (2002), "refers to the structure of language which governs how words are ordered in particular sequences" and "clearly demonstrates the linkages of words in continuous texts" (p. 110).

CHAPTER 11

A Review of the Literature

Oral Reading: Purposes and Practices

Research on fluency is grounded in the belief that listening to oral reading affords opportunities for teachers to learn more about students' reading processes and their understanding of texts. In addition, it is believed that classroom practices promoting fluency in oral reading, including teachers' constructive prompts and feedback, will positively affect students' understanding of authors' messages. Rasinski and Hoffman (2003) and Rasinski (2006) demonstrate in their histories of oral reading instruction that the attention now being given to reading fluency is not new, but is deeply rooted in over a century of research and practice.

These authors state that the shortage of books and of literate members in each household in colonial America necessitated oral reading instruction in schools. In the school curriculum, eloquent reading came to be an outcome in itself, a skill that would be required for entertaining and communication in everyday life. To this end, students learned oral recitation, articulation and proper use of the voice to dramatize the author's words. The success of students and teachers was judged by the quality of performance the student brought to the recitation.

At the turn of the 20th century, critics challenged oral recitation instruction, arguing that this emphasis on elocution precluded the importance of comprehension. According to Huey, (1908) "the consequent attention to reading as an exercise in speaking, and it has usually been a rather bad exercise in speaking at that, has been heavily at the expense of reading as the art of thought-getting and thought manipulating"

(p. 359). Silent reading, in his view, allowed the reader to discriminate the essential from the non-essential details in text and to allocate time and attention to passages of the most interest. As this stance became more popular, and as more books became available in homes and schools, the emphasis on oral reading declined, and the shift to silent reading began and continued well into the 20th century. Theorists continued questioning the value of oral reading in interpreting the author's message, and silent reading began to be seen as a more efficient, effective practice, but further, as the key to comprehension. This instructional emphasis was supported and necessitated by the advent of group-administered standardized tests featuring passages to be read silently.

The practice of *round robin* reading, in which a group of students takes turns sight-reading unrehearsed passages of a common text, arose with the advent of basal readers, which appeared in schools as early as the 1930's. Rasinski and Hoffman (2003) note that this practice became popular because it allowed teachers to check for reading errors while maintaining control over the group and motivating poorer students to improve. Hoffman (1987), however, describes a particularly painful observation of a round robin reading group in which a teacher called upon a poorer reader to take her turn, and berated her throughout the entire passage. While the teacher's intent was to respond constructively to the student's oral reading, the cost to the student was high in terms of frustration, confusion, and self-respect. Despite this and other supporting research showing the ineffectiveness of this practice, Kuhn and Schwanenflugel (2006) report that round robin reading it is very much alive in classrooms to this present day.

Goodman (1965) viewed reading as a psycholinguistic process in which the reader uses cuing systems within the text, outside the text, and within himself/herself to interact

with written language. Based on this perspective, listening to a child's oral reading and studying the cues, miscues, re-reading, and self-corrections provided data on how the student was using or misusing available sources of information. In one particular study of the oral reading of first, second, and third grade children, he showed that children were able to read words in the context of a story more effectively than in isolated word lists. He used these results to support his argument that "we must abandon our concentration on words in teaching reading and develop a theory of reading and a methodology which puts the focus where it belongs: on language" (p. 643).

In contrast to the work of Goodman, LaBerge and Samuels (1974) began to rekindle interest in listening to oral reading with a different purpose, that is, to consider how fluency, as characterized by rate and accuracy, might affect the comprehension of text. This resurgence of interest in teaching students to read fluently continued. Allington (1983) contended that "developing oral reading fluency should never become the only goal in beginning or remedial instruction, but it is at least as important as many others" (p. 560).

Clay (1991) regarded listening to oral reading as a means of gathering critical evidence about the child's reading and offered the following rationale:

> Observable reading behavior provides evidence of all the things teachers have always thought it did—knowing words, getting meaning, using a sense of story, and working on unknown words in some way. It also includes directional behaviour, recognizing letters or pronounceable clusters, working to get the word sequence right, reading fluently, and locating and correcting error. Such

> behaviours signal that, inside the child's head, other kinds of activity have possibly occurred. (p. 321)

To this end, Clay promoted the taking of *running records*, a "systematic procedure for recording reading behaviours observed during text reading, a tool for recording and then interpreting how children work on texts" (2002, p. 45). Listening to oral reading combined with the taking of running records has continued to be a favored method of assessing children's reading and informing subsequent instruction, and an integral part of each Reading Recovery™ lesson. According to Clay (1991), not only does oral reading provide the teacher with critical information about the child as a reader, but may also facilitate the child's mental processing as s/he hears the reading. Clay contends that reading aloud allows the beginning reader to hear his/her own reading, affording greater access to the meaning of text, providing opportunities to hear errors and correct them, and enabling articulation of new and difficult words s/he is attempting to solve.

Goodman (1997) reaffirmed the importance of examining and interpreting oral reading errors in understanding the strengths and weaknesses in children's reading processes. Pinnell, Pikulski, Wixson, Campbell, Gough, and Beatty (1995) claimed that one of the most significant findings of their large fourth grade study is that listening to children read aloud is an extremely important source of information regarding children's developing reading.

Many teachers today incorporate the practice of *guided reading* into their classroom literacy regime. As defined by Fountas and Pinnell (1996), guided reading is

> a context in which a teacher supports each reader's development of effective strategies for processing novel texts at increasingly challenging levels of

difficulty. The teacher works with a small group of children who use similar reading processes and are able to read similar levels of text with support. (p. 2)

In this setting, the teacher introduces a story to the group and circulates as each child reads the text at his/her own pace, listening in on the oral reading for evidence of the child's reading process, and responding and guiding accordingly. Rasinski and Hoffman (2003) state that these procedures "point toward the positive ways in which careful monitoring and responsive teaching can be used to develop an effective repertoire of word recognition and comprehension strategies" (p. 518).

Pikulski (2006) reflects a contemporary view of the role of reading aloud, stating that "although oral reading is not nearly as widely used or as utilitarian as silent reading, oral reading is vitally important because it is an observable reflection of decoding and fluency, which are nothing less than essential for reading comprehension" (p. 71). Rasinski and Hoffman (2003) see major benefits in listening to children's oral reading such as assessing and teaching for fluency, responding appropriately to help children learn from miscues, and helping children develop appropriate reading strategies.

The practice of, and reasons for, listening to children read orally have clearly evolved over the last century, from the teaching of refined elocution skills to the gaining of evidence about the child's control over the reading process. As the purpose of teaching, listening to, and observing oral reading has evolved, so have the concept of fluency and beliefs about how it fits into the reading process.

Fluency: An Evolving Concept

A review of the literature reveals that descriptions of fluency are as contrasting as the theoretical standpoints of the writers. Over the last thirty years, the main criteria of

rate used in describing fluency, originally developed by LaBerge and Samuels (1974) has been expanded to include more prosaic elements such as expression. Schreiber's (1991) depiction of fluent reading as "smooth, expressive production with appropriate phrasing or chunking" is typical of views that have helped broaden understanding. More expansive definitions attempt to link rate, accuracy and expressive elements with comprehension. Rasinski (2006), for example, offers a broader view in which fluency refers to the "readers' mastery of the surface level of texts they read—the ability to accurately and effortlessly decode the written words and then to give meaning to those words through appropriate phrasing and oral expression of the words" (p. 61). While fluency was always linked in some way with comprehension in the eyes of theorists and researchers, it is becoming increasingly common to see the two concepts joined in definition. Samuels (2006) states that accuracy, speed and expression are as much indicators of fluency as are readings on a thermometer, and that the true essence of fluency lies in being able to decode words and understand the text at the same time.

Pikulski and Chard (2005) call for a comprehensive definition of fluent reading that reaches beyond rate, accuracy and expression, and that firmly links fluency to the understanding of text. They contrast surface views of fluency that emphasize rate, accuracy, and prosody with broader, deeper constructs that view fluency as "part of a developmental process of building decoding skills that will form a bridge to reading comprehension and that will have a reciprocal, causal relationship with reading comprehension" (p. 511). Recent definitions such as this demonstrate the refinement in the concept of fluency and its role in the reading process that has occurred over the last thirty years.

In Slayter and Allington's (1991) brief historical description of views on fluency they suggest that with current understanding of the reading process it is necessary to re-examine the role of fluency in the oral reading of students. They claim that "oral rendition and comprehension can be intricately intertwined in classrooms" (p. 147). In their view it is critical to draw on an understanding of the reading process in establishing a definition of fluency.

Particular understandings of the reading process, however, give rise to differing views on fluency. These understandings reflect beliefs about what successful readers do, and about instruction that enables successful reading development. While current conceptualizations of fluency may reflect some convergence in thinking, it is helpful to acknowledge the contribution of the early literature bearing two distinct lines of thought. One line of thought is the connection of fluency with rate and accuracy, and the other is the linking of fluency with prosody.

Rate and Accuracy

Huey's (1908) argument for silent reading was based on the observation that oral reading could be a slow laborious process, and on an assumption that silent reading was inherently a more efficient practice. His early writing provided support for the work of automaticity theorists who would follow later in the 20th century. In his view,

> almost everything is in favor of the rapid reader. Not only does he save valuable time, but having the eye far ahead of the voice, and having, too, a larger amount of what is being read ringing simultaneously and unitarily in the inner speech, s/he holds in his/her grasp at every moment a larger total of meaning, and sees each part in a better perspective. (p. 360)

Huey's words were echoed by Adams (1990) as she stressed the importance of fast, automatic, fluent word reading in accessing the meaning of a sequence of words in text. She explained that the reader must be able to retain the memory of the previously read words as the eye moves along the line of print, necessitating speed and automaticity. She states that,

> the importance of automaticity relates to the fact that the search for coherence requires active, thoughtful attention. Where a reader is instead wrestling with the resolution of any particular word, syllable, or letter of the text, comprehension is necessarily forfeited. (p. 413)

Regardless of the stance taken by researchers and theorists, most work on fluency recognizes the significant contribution of LaBerge and Samuels' (1974) theory of automatic information processing in reading. According to LaBerge and Samuels, reading is a complex process involving the co-ordination and integration of many component subskills. The reader has only so much attention to devote to each of these subskills and fluency cannot be attained unless certain aspects of this complex process become automatic, freeing the attention for components that are less automatic. Readers pass through sequential stages of processing the visual information in text "en route to meaningfulness" (p. 295). A fluent reader must constantly attend to the "meaning units of semantic memory, while decoding from visual to semantic systems proceeds automatically" (p. 313). LaBerge and Samuels strongly suggest that with repeated practice the decoding process becomes more automatic, allowing the reader to shift attention to word units and to short groups of words or phrases. Component subskills of reading are acquired one by one, but as reading becomes more fluent, there is a fading of

the dividing lines between the subskills. Automaticity and speed are the hallmarks of fluent reading and deep comprehension is the end goal.

Perfetti and Hogaboam (1975) present a compatible view of the reading process in which reading comprehension depends on the ability to decode and produce words rapidly. In an experiment with 64 third and fifth grade students, they grouped the subjects according to performance on a test of comprehension. Students were then asked to read lists comprised of three types of isolated words flashed individually on a screen: common words, less common words and pseudowords. Results showed that good comprehenders were clearly more able to decode and orally produce all types of words more rapidly. These investigations provided evidence that "the good reader does this quickly and automatically on the basis of well-learned skills that take advantage of letter and sound redundancies, while the poor reader does this with some effort and not automatically" (p. 468).

In a similar vein, Gough and Tunmer (1986) attempted to reduce the reading process to a simple mathematical equation in which reading is a product of decoding and comprehension ($R = D \times C$). They argue that reading disability could result from failure to comprehend, failure to decode words rapidly, or from a combination of both. It is clear that from their theoretical perspective, the ability to decode words quickly and accurately is the key to successful reading.

Stanovich (1980) questions bottom-up theories such as that of LaBerge and Samuels, and suggests instead an interactive-compensatory model of reading. In this model, a reader can draw from several sources of information simultaneously but "a process at any level can compensate for deficiencies at any other level" (p. 36). In his

view, readers can use different sources of orthographic, semantic, phonological and syntactic information in text. Those who are less proficient may rely on one source of information more heavily than others, thus compensating for weaknesses. For example, a reader who is weak in rapid automatic word recognition may rely more heavily on the use of context clues. The fluent reader, on the other hand, recognizes words rapidly and mostly on the basis of physical cues, so that expectancy processes that draw cognitive capacity are not necessary. Thus "his/her capacity is being used for comprehension, rather than for conscious prediction processes that aid individual word recognition (p. 57). In this respect Stanovich agrees with LaBerge and Samuels that the fast, automatic word recognition of the fluent reader is what frees his cognitive capacity to attend to comprehension. Nathan and Stanovich (1991) later defend this view against critics who suggest that rapid automatic word reading is simply "word calling", devoid of comprehension, and state that reading words fluently is "one mechanism that serves to support efficient, enjoyable reading, which is characterized by a focus on the meaning of the passage, use of cognitive capacity for high-level processes of text elaboration, critical reading, and comprehension monitoring (p. 178). The ability to think in a more complex way about text appears to be made possible by reading words quickly and effortlessly.

Theories in which speed is the key to comprehension have given rise to a plethora of research on the repeated reading method, consisting, according to Samuels (1997), of repeatedly reading a brief passage many times until a satisfactory degree of accuracy has been achieved. In a (1997) republication of his earlier work on the repeated reading method, Samuels celebrates its success and longevity over the years in improving students' fluency and comprehension as measured by increased speed.

One product of Samuel's theory is Herman's (1985) research using the repeated reading of five separate stories with eight non-fluent intermediate grade students. Herman noted the improvement from initial to final readings of stories repeatedly practised over a three-month period. Results of her study indicated a significant increase in rate and accuracy, and a decrease in length of pauses, suggesting that some degree of automaticity had been achieved through practice. In addition, an analysis of errors showed that higher-quality errors (those that did not compromise the meaning of the passage) were more prevalent after repeated practice. She interpreted this to mean that repeated practice to improve word recognition is an effective way of improving reading comprehension.

Breznitz (1987) provides an example of early quantitative research based on a theory in which rapid word decoding is the key to comprehension of text. In a series of four controlled experiments using a total of 262 first grade students, researchers first audio-taped subjects as they read a passage at their own pace, and then manipulated the pace by having them read passages from a computer screen. Comprehension tests administered after reading indicated that a faster reading pace enabled better comprehension, while a slowed pace hampered the understanding of the passages. One implication drawn from this study was that there is a discrepancy between actual student performance and intellectual capacity.

Lending support to LaBerge and Samuel's automaticity theory, Therrien's (2004) meta-analysis of quantitative studies dealing with repeated reading attempts to link reading speed and accuracy to comprehension. Based on the findings, Therrien concluded that fluency and comprehension are indeed improved by the repeated reading of passages and suggests that fluency and comprehension on new passages may be improved as well.

The practical implication is that students with reading difficulties must repeatedly read the same passage aloud until a satisfactory level of performance is achieved, and must receive positive "corrective feedback" from an adult listener.

Samuels (2002) says that with extended reading practice, fluent readers can decode, or read words on the printed page, quickly, automatically and holistically without having to give undue attention to sounding out. When this occurs they are able to attend simultaneously to comprehension. Beginning readers are unable to divide their attention between decoding and comprehension and as a result must attend first to decoding, which may require semantic processing, and then to understanding the text. Decoding and overall text comprehension are seen as separate processes requiring the reader's attention.

A good deal of research connecting fluency with rate and accuracy is grounded in the belief that reading proficiency is achieved in levels or stages. Ehri and McCormick (1998) present a series of phases in which the child gains increasing ability to decode, analogize, remember, or predict words en route to fluent word reading. In the Pre-Alphabetic stage, the child is unable to make letter-sound correspondences and may remember words by gross visual cues, guess at words in text, or pretend to read. In the Partial-Alphabetic stage, children begin to notice some letters in words and use this knowledge together with context cues in guessing new words. The Full- Alphabetic phase is characterized by increased awareness of letter- sound connections, and a growing ability to decode new words combined with an expanding sight vocabulary. In the Consolidated-Alphabetic stage, the child demonstrates growing ability to see and use larger chunks of letters in decoding words. Truly proficient word reading occurs as the child enters the Automatic stage in which a large sight vocabulary and control over letter-

sound relationships enable the child to read most words effortlessly and automatically. In this view, students experience difficulty reading fluently if they have not passed through and mastered each step.

Similarly, Wolf and Katzir-Cohen (2001) believe that fluency begins with the development of accuracy and automaticity in word decoding. Decoding is enabled by "perceptual, phonological, orthographic, and morphological processes at the letter, letter-pattern, and word levels, as well as semantic and syntactic processes at the word level and connected text-level" (p. 218). Once control over the lower level processes of decoding has been achieved, smooth effortless reading with prosody and attention to comprehension is possible. These authors present a program in which dysfluency is addressed through daily practice in decoding isolated words.

Eldredge's (2005) study is based upon a stage model theory of reading in which phonemic awareness is a precursor to phonics knowledge, phonics knowledge leads to word recognition, word recognition allows fluency, fluency being essential for comprehension. Eldredge dispenses with Allington's (1983) position on the importance of prosody in fluent reading, saying that it remains unproven by research. Eldredge's study measured growth in phonics knowledge, word recognition, and fluency in the reading of 111 first-grade, 117 second-grade, and 76 third-grade students. Phonics knowledge was measured by the ability to read a list of pseudo-words, word recognition was measured by a series of four increasingly difficult word tests, and fluency was measured by the accuracy and rate of word reading on running records. All tests were administered once in February, and again in November of the next year. Using a cross-lagged panel method to establish a correlation between the elements in the study, Eldredge found a causal

relationship between phonics knowledge and reading fluency that is mediated by word recognition, thus providing further support for a bottom-up theory of reading and for deliberate phonics instruction in early years classrooms.

The writing of LaBerge and Samuels and the current work of automaticity theorists continue to exert a powerful influence on fluency research, government policy, and classroom practice. Mathson, Allington and Solic (2006) report that the State of Florida, among others, has recently mandated DIBELS (Dynamic Indicators of Basic Early Literacy Skills), a standardized fluency assessment tool claimed by Hintze, Ryan, and Stoner (2003) to identify reading problems, and to provide a sequenced routine of isolated skill instruction aimed at improving fluency and comprehension. While commercial programs such as this appeal to some educators and appear to provide easy solutions to complex problems, Matheson and her colleagues warn that "a decontextualized instructional focus on exact word recognition may lead students further from literacy, because their motivation becomes correct word calling rather than making sense of what they read" (p. 110). However, the relative ease of measuring reading rate has encouraged researchers and practitioners to continue searching for evidence that speed and automaticity are the hallmarks of fluency, and lead to better comprehension. Stage model theorists and researchers have supported and helped explain this view of fluency. In contrast, the following body of work focuses on prosody as the hallmark of fluent reading and provides another dimension from which to view fluency.

Prosody

In a compilation of definitions from previous researchers and theorists, Kuhn and Stahl (2003) describe prosody as "a series of features including pitch or intonation, stress or loudness, and duration or timing, all of which contribute to an expressive rendering of a text". In addition they state that "prosodic reading includes appropriately chunking groups of words into phrases or meaningful units in accordance with the syntactic structure of the text" (p. 6). Hudson et al (2005) say that prosody is "a linguistic term to describe the rhythmic and tonal aspects of speech: the "music" of oral language" (p. 704).

While there is an abundance of research attempting to link rate and accuracy with effective reading, research on the presence and effect of prosody in reading is in shorter supply. Dowhower (1991) attributes this shortage to the relative ease of capturing rate and accuracy in comparison to the difficulty of measuring and quantifying the more melodic patterns and rhythms of speech (p. 165). Schwanenflugel, Hamilton, Kuhn, Wisenbaker, and Stahl (2004) reiterate that research on prosody is "surprisingly sparse" and point to the current popular practice of using fluency rating scales in lieu of a more scientific measurement of prosodic elements in reading. While research of this type is harder to come by, there are a number of influential theorists and researchers who have contributed to understanding the role of prosody in fluent reading.

While Smith (1971) does not address the concept of fluency in particular, his theory provides an alternate view to the bottom-up theories popular at the time, and fits into this review as a means of understanding the complexity of the reading process. He sees the act of reading as an interaction between the reader and the text, involving the use of a combination of visual information from the written words and non-visual information

or knowledge that is already stored within the brain of the reader. In his view, the more non-visual information a reader can access, the less visual information the eyes need to use. To him, "fluent reading depends on the ability to use the eyes as little as possible" (p. 3). The brain of the reader can process only so much visual information at one time. If the reading act requires the reader to use an overabundance of visual information, a bottleneck can occur, in effect blinding the reader to the text. As the reader makes use of both visual and non-visual information s/he is able to dispose with some alternatives and select others, thus reducing uncertainty and ensuring comprehension. If the reader is unable to combine visual and non-visual information in a manner that reduces uncertainty, and if s/he is instead slowly discerning letter by letter and word by word, s/he will be unable to understand messages in text. Smith states that,

> the "slow reading" that must be avoided is the overattention to detail that keeps the reader on the brink of tunnel vision. Trying to read a text a few letters or even a whole word at a time keeps a reader functioning at the level of nonsense and precludes any hope of comprehension. The aim should be to read as much text as possible with every fixation to maintain meaningfulness. Classroom advice to slow down in case of difficulty, to be careful and examine every word closely, can easily lead to complete bewilderment.
>
> (p. 37)

In this view, the brain of the fluent reader selectively samples only enough visual information in text to verify or change what it has already predicted. Fluent reading then does not rely solely on rapid word decoding, and is aided by what the reader can bring to the text in terms of his/her own thoughts and experience.

Chomsky's (1976) work emerged at a time when lines were being firmly drawn between top-down theorists such as Smith and bottom-up theorists such as Samuels. Her work is notable in that it lends support both to repeated reading researchers as well as to those who emphasize the importance of prosody. Over a period of four months she worked with five, third graders who had received a great deal of instruction in decoding, but who still did not read successfully. Each student repeatedly listened to and read orally with taped stories until they were able to read the stories with ease. Throughout this intervention she noted improvements not only in the fluency of the reading, but in the children's self confidence, their attitude toward reading, and their willingness to read new material. While supporters of repeated reading take this as evidence of the effectiveness of repetitive practice, other conclusions may be drawn. In the following statement Chomsky seems to suggest that reading is a much more complicated undertaking for children than simple word decoding:

> What they need is to shift their focus from the individual word to connected discourse and to integrate their fragmented knowledge. It is the larger picture that they need help with, in learning to attend to the semantics and syntax of a written passage, and in developing reliance on contextual clues from the sentence or even longer passages as they read. (p. 289)

Chomsky's work reflects a contrasting view of the reading process in which the fluent reader interacts with the text, using what is known about decoding in combination with the meaning and language structure of the story. It suggests that good readers must attend to the complex structures of text and to the sound of language.

Schreiber (1980) examined Chomsky and Samuel's repeated reading studies and found that their positive results did not explain the skills acquired in repeated reading that enabled the reader to perform more successfully with each repetition. He refers to his own research in which young children appeared to compensate for the absence of prosodic cues in the text, displaying some tacit awareness of the way in which words should be strung together. He suggests that with repeated reading, a reader who is becoming more proficient

> begins to recognize what kind of syntactic phrasing is necessary in order to make sense of the passage; this recognition comes about as s/he discovers and makes use of the syntactic, semantic, morphological, and contextual features which are found in the written form and which correspond to features that s/he can and does use to a greater or lesser extent in aural processing. (p. 182)

Thus the increasingly proficient reader develops a tacit understanding of how to use parsing strategies to extract the author's message. Over 20 years later, Schreiber (1991) states that dysfluency, the inability to read smoothly, expressively and with appropriate phrasing, can result from lack of attention to the hierarchical syntactic organization of sentences into phrases. He refers to the prosodic features of stress (syllabic prominence), intonation (rise and fall of pitch) and duration (length of time taken to make an utterance). He states that in order to segment sentences into chunks the reader must be attuned to morphological, syntactic, semantic, pragmatic and phonological cues. Citing Crystal (1975) who showed that prosodic features of language are observable even in the babbling of babies, Schreiber says that children should be able to use the melodic aspects of speech in learning to use structure in early reading attempts. He says that acquiring

reading skills does not necessarily mean acquiring new competence with language, but instead means mastering that language within the new medium of print. According to Schreiber, teaching decoding and word recognition does not ensure fluency because children do not automatically use this knowledge in concert with their natural ability to chunk language as they speak. Referring to Dowhower (1986, 1987), he reiterates that fluency and the ability to attend to syntactic organization can be acquired through repeated reading of passages that have been segmented into phrases.

In a ground-breaking quantitative study, Clay and Imlach (1982) investigated the presence and frequency of three linguistic variables in the oral reading of 103, seven and eight year olds. They measured juncture (pauses between words in the continuous flow of reading), pitch (the rise and fall of the voice) and stress (loudness of the voice) and correlated the data with accuracy and speed scores obtained on the reading of four increasingly complex stories. They found that the best readers paused less often between words and read longer stretches of words before pausing, their voices dropped at the end of sentences and they used stress less frequently and more selectively than poorer readers. Data pointed to a clear connection between these three variables and speedy accurate reading. One suggestion arising from this data was that in the complex psychological process of reading "the best readers can work through a sequence of possibilities guided by story, inter-sentence, and sentence cues, and can drop to the levels of phrase, word, and letter probabilities if necessary" (p. 64).

Chafe (1988) studied oral reading not from a theoretical perspective on the reading process, but from a linguistic interest in the relationship between the authors' use of punctuation, and readers' responding use of intonation. He believed that,

> writers when they write, and readers when they read, experience auditory images of specific intonations, accents, pauses, rhythms, and voice qualities, even though the writing itself may show these features poorly if at all. This "covert prosody" of written language is evidently something that is quite apparent to a reflective reader or writer. (p. 397)

In his view, in spite of the presence or quality of punctuation, readers are guided by a prosodic inner voice which manifests itself in oral reading. Chafe studied the length of intonation units (the number of words strung together as the voice rises and falls) as 20 undergraduate students and 8 adult education students read a variety of passages into a tape recorder. He observed that readers often imposed their own oral boundaries on groups of words, seemingly in an attempt to match their reading with oral language. He noted that periods usually signaled falling pitch in voice while commas did not. He found that oral readers almost always imposed more intonation units that the author signaled with punctuation and suggested that "perhaps learning to deal with written language involves learning to give prosodic interpretations to specific syntactic patterns, even when punctuation is not involved" (p. 414). Good readers, then, are able to flexibly interpret and produce units of language in keeping with their own understanding of the writer's message.

Allington (1983) considers the neglected aspect of teaching children to read in meaningful phrases, and suggests that theories of automaticity and rapid word decoding engender "further instruction in letters, sounds, or words in isolation, in the mistaken belief that more attention in this area will result in improved reading (p. 557)". He questions instructional techniques allowing proficient readers to continue improving

through meaningful practice on easy texts while poorer readers often work on material that is too hard and are given "large doses of letter, sound, and word instruction, to the neglect of larger units of text-like sentences and stories" (p. 558).

Dowhower (1987) moved toward reconciling the contributions of earlier contrasting theorists to the understanding of fluency in her quantitative study of the effect of repeated reading procedures on the oral reading performance of 17, second grade readers. Students with average or above-average reading ability but with slow word-by-word reading were given repeated practice with read-along training, or with independent practice. After repeatedly reading passages in five basal stories over several weeks' time, participants were tested on practised and unpractised passages to study changes in comprehension, speed, accuracy and use of prosody. For both groups, results showed significant gains in rate, accuracy, and comprehension. New evidence pointed to the positive effect of repeated practice on inappropriate pausing, length of phrases, elongation of the final vowel in the sentence and falling pitch at the end of the sentence.

Carver's (1988) study of thirty grade two readers suggested that reading performance and comprehension could be enhanced not only by the repeated reading of naturally occurring text, but also by the rereading of segmented text divided into thought or pausal units.

Dowhower (1991) asserts that while researchers have readily quantified word accuracy, they have largely ignored the third element of prosody. Prosody, in her conceptualization, is featured by pitch changes, stress or loudness and duration or timing evident in expressive, rhythmic, melodious reading. She describes a number of aspects of prosody investigated by previous research. She cites Eagan (1975) and Kowal,

O'Connell, O'Brien, and Bryant (1975) who pointed to the correlation between appropriate pauses between words and phrases and skilled reading. Supported by the research of Coots (1982), Dowhower stresses the significance of reading in appropriate phrases or groups of words that are phonologically or syntactically acceptable. She refers to Cooper and Cooper's (1980) suggestion that children who lengthen the ends of phrases are beginning to chunk language into appropriate units. Dowhower (1991) speaks of children's sensitivity to prosody and exaggerated language, as well as the importance of using texts and methods of instruction that help children attend to this aspect of reading in order to gain fluency. Kuhn and Stahl (2003) interpret Dowhower's view of prosaic readers as those who are able to

> transfer their knowledge of syntax from speech to text by effectively applying these features to their reading. Such readers can produce a rendering of text that maintains the important features of expressive oral language in addition to reading it accurately and at an appropriate rate. (p. 7)

Key elements of fluency as described by the National Center for Education Statistics (1995) are the phrasing or grouping of words as evidenced by intonation, stress and pauses, attention to the syntax intended by the author, and expressiveness. This description was derived from their study using an oral reading scale to rate the fluency levels of 1,136 fourth grade readers. Results showed that students who read at the higher end of the scale were able to read in larger phrases, preserve the author's syntax and interpret the story in a more expressive way than those who rated lower on the rubric. In addition students who ranked higher on the scale in terms of fluency were also considered to be the more proficient readers as evidenced by their understanding, interpretation,

ability to make connections with personal knowledge, and read critically. Proficient readers were found to be more accurate and read at a faster pace than less fluent readers. This view of the role of fluency is strongly supported by earlier studies that examined the sound of children's oral reading

Schwanenflugel et al's (2004) quantitative study is ambitious in its attempt to link prosodic elements with decoding and comprehension skills. These authors suggest that the ability to segment text using syntactic and semantic boundaries may function as a partial mediator between simple decoding and comprehension. In addition they hypothesize that the presence of prosodic features in oral reading may indeed provide evidence of comprehension. The researchers audio-taped recordings of the reading of 120 second and third grade students and employed a spectrograph to measure length in pauses within sentences and between sentences, as well as the drop in voice pitch at the end of sentences. The reading of 34 adults was used as a measure from which to compare the children's reading. They found that good to excellent readers mirrored the performance of adult readers in their demonstration of "brisk" pacing, clear pauses between sentences, few pauses within sentences and falling pitch before the end of sentences. Longer pauses and hesitations with little modulation in voice were characteristic of the less proficient readers. While this study did not provide evidence of prosody as a contributor to comprehension, it is particularly informative in supporting the earlier work of Clay and Imlach (1971) and in providing extremely useful language for describing the oral reading fluency of good and poor readers.

The influence of the above research on prosody is evident in fluency rubrics, checklists, and rating scales suggested by influential authors and theorists (Zutell & Rasinski, 1991, Hudson et al, 2005, Reutzel, 2006, Kuhn & Schwanenflugel, 2006).

The above two sections have reflected the theoretical basis from which researchers and theorists have viewed the concept of fluency over the past thirty years. The following section provides an overview of literature that acknowledges and builds upon past contributions, but considers the role of fluency within complex reading processing systems.

Reading as a Complex Process

In this study I take the position that the complexity of the reading act cannot be described by a simple theory of word decoding. Considering only rate and accuracy of word reading results in a limited, one-dimensional view of the child as a reader. Some children are able to read very rapidly with few errors, but are not able to demonstrate understanding of the text. On the other hand, as classroom teachers have noted, a child's ability to read prosodically does not necessarily reflect or ensure reading comprehension. It is now generally accepted in the literature that fluent readers demonstrate aspects of speed, accuracy, and prosody in comprehending the author's message. However, I believe that in order to obtain a complete picture of the child as a reader, all of these aspects must be considered in light of the child's current overall reading processing. The following authors and researchers help to clarify the concept of fluency by viewing it as part of an active, flexible, constructive reading process.

Rummelhart (1994) argues that reading is both a perceptual and a cognitive process and proposes an interactive model of reading in which the following six sources

of information work together in complex ways during the reading process: feature knowledge, letter level knowledge, letter cluster knowledge, lexical level knowledge, syntactic knowledge, and semantic level knowledge. He suggests that "all of the various sources of knowledge, both sensory and nonsensory, come together at one place and the reading process is the product of the simultaneous joint application of all the knowledge sources" (p. 878).

While W. Kintsch's (1988) construction-integration model of reading does not directly address the concept of fluency, it allows for an examination of fluent reading within the context of a complex, flexible, changing process. Based on research with older subjects, he proposes that in constructing meaning from text, word identification is but one mechanism enacted by the reader. It is the reader's knowledge about words, the ways language and texts work, and the world in general, that allows for the construction of meaning as words are being identified. The reader's knowledge base is integrated with the linguistic input from the text, allowing him/her to make decisions, eliminate wrong meanings, and change his or her mind during the course of reading. It appears from this theory that the reader's brain is able to make remarkable and unique connections using stored knowledge as a means to interpret the author's message. The reader constructs meaning in short cycles, loosely related to short sentences or phrases in the text. As words are read, they come together in the reader's mind with neighboring words in the passage, allowing small amounts of meaning to settle or integrate with the overall meaning of the text. The words and phrases in the text provide the raw material from which the reader is able to form a mental picture of the author's message. E. Kintsch (2005) further clarifies this theory in saying that true understanding involves the building of a mental picture of

the situation in the text, requiring "deeper processing, which effectively integrates the ideas in the text with information in the reader's personal knowledge base" (p. 54). She states that while this process occurs easily and automatically in familiar, easy tasks, more conscious effort akin to problem-solving is necessitated by harder tasks.

Supported by the earlier findings of Clay and Imlach (1982), DeFord (1991) states that although fluency involves a certain degree of accurate word reading, it is more important to consider juncture (pauses between words), pitch (the rising and falling of the voice), and stress (emphasis placed on words). In addition, fluent reading involves the orchestration of meaning, language, and visual and nonvisual information available to the reader. Reiterating Clay's (1971) findings, DeFord says that good readers vary the pace of their reading, working flexibly through all available sources of information.

Pressley, Gaskins and Fingeret (2006) describe some of the hallmarks of effective reading in older readers as the ability to produce constructive responses, to overview and scan text, to re-read when confused, to create images in the mind, to summarize, interpret and evaluate the author's message, and to respond emotionally to text (p. 47). Rate and accuracy in their view are not goals in and of themselves but fit into the definition of good reading in allowing the reader to speed up or slow down as appropriate when responding constructively to the text. These skills certainly reflect the development of a very complex reading process.

Walker, Mokhtari, and Sargent (2006) present a conceptual framework in which fluency is "an integral part of the complex reading process" (p. 86). They see fluent reading as "a multifaceted process that requires the careful orchestration of several interrelated skills and competencies" (p. 101). According to their framework, one key

aspect of fluent reading is performance, characterized by rate, accuracy, expression and phrasing. Interacting with this is competence, which includes the reader's knowledge of words and of language and text structure. The authors include a third, less often considered aspect of fluency, disposition, which considers the reader's interests, attitudes, and perceptions of reading. The purpose of their article, they say, is to invite future discussion of the complex interrelationship between fluency and reading as a process.

Clay's (1991) definition of reading is "a message-getting, problem-solving activity which increases in power and flexibility the more it is practised" (p. 6). Her (2001) description of proficient reading exemplifies this definition and suggests that reading involves much more than quick, accurate word production. She shows that the complexity of the reading act cannot be reduced to a simple theory of word decoding in saying that what on the surface looks like simple, word-by-word reading of a short and simple story involves children in linking many things they know from different sources (visual, auditory/phonological, movement, speaking/articulating, and knowledge of the language). When they problem-solve texts they dip into these 'different ways of knowing something' and make a series of decisions as they work across text. To look only at letters and words, or how comprehension questions are answered, is to ignore the problems faced by the reader to sequentially 'solve the parts within the wholes' to get the precise message (p. 79). She states that while it is tempting to adopt simple theories that involve amassing vocabularies of words, developing word attack skills, and recognizing many words quickly in sequence as a basis for teaching comprehension, the aim of literacy instruction is "clearly not to produce readers and writers of words one at a time but rather to read words as interconnected, in phrases, in language structures, and across discourse"

(p. 105). In her view, working from a simple theory negates the rich unique resources of oral language, culture, life experience, world knowledge, and story awareness that each child brings to the reading of texts. As young children move across lines of continuous text, they bring this knowledge to bear, along with their developing knowledge of the written code, in order to make decisions about where to direct their attention, where to search for solutions, what information is most useful at the moment, how to link what they know to the current problem, how to judge whether the correct decision has been made, and what to do when the decision they have made is in some way unacceptable. In learning to read, the child begins to "assemble working systems" specially suited to solving particular problems and accomplishing particular jobs in solving problems and making decisions about the author's message. As the child becomes more proficient, these simple working systems become increasingly efficient, flexible, and integrated into a smoothly running literacy processing system.

Based on Clay's theory, Schwartz (2005a) presents a conceptual framework of fluency as one such working system in which several factors contribute and work together. Fluent reading requires and demonstrates that the child is keeping the focus on the author's meaning. It involves the efficiency of visual scanning through continuous text. It is enabled by automatic recognition of sight words and efficient problem-solving of new words. Furthermore, the child reads with an expectation of how fluent reading should sound. In this view, fluency is more than the outcome of proficient reading. It is seen as a working system that plays a dynamic part in problem-solving the messages in text.

Furthermore, Schwartz (2005b) illustrates the complexity of the decision-making teachers must do in responding to children's initial efforts to read. He states that when a child makes an error in oral reading, the teacher must take into consideration that particular child's recent history of responses in order to understand how best to praise the child or prompt him/her to further action. In his view, the advice we give children while reading helps them to build working systems that allow for increasing control over the reading process. He states that, "to respond quickly and effectively to teaching opportunities during oral reading, we need a tentative but elaborate theory of a particular student's literacy development" (p. 438), and that "an effective processing system for reading is made up of knowledge and mental strategies that are much more complex than the usual advice we give students" (p. 439). The decisions teachers must make in responding to individual students are as complex as the reading process itself. Teachers, then, need to work with clear understanding of the reading process in order to respond appropriately to the oral reading of children.

Clay's (2001) concept of reading efficiency seems to fit well with the idea of fluency as part of a more complex process. She says that as children become proficient readers, they "construct networks of minimally conscious strategies for making letter and word decisions in controlled sequences that are consistent with the preceding text" (p. 80). This involves the building of a *complex processing system,* allowing them to attend to letters, words, and sentences, bearing in mind what meanings and language structures have preceded, and anticipating possible upcoming meanings and language structures. Processing, she explains, means "getting access to and working with several different types of information to arrive at a decision" (p. 80).

The above literature review has demonstrated that fluency is a multifaceted concept, our understanding of which is complicated by extreme theoretical differences on reading itself. The act of reading is viewed by some as a linear acquisition of component sub-skills and by others as a complex, flexible, dynamic process. Teachers' responses to children's early reading attempts must be based on an understanding of how fluency and the reading process work together. This research project keeps open and expands on the discussion of fluency as it fits into the development of complex early reading processing systems as described by Clay (2001). While we have at hand an abundance of articles and research studies on fluency, we can still learn from classroom evidence of fluency as demonstrated by the oral reading of grade one readers. The next chapter will present the research method selected for learning based on classroom evidence about fluency.

CHAPTER III

Methodology

Purpose and Research Questions

Years of research have not sufficiently clarified the informative value and practicality of listening for and detecting signs of fluency in early reading. Furthermore, an understanding of how fluency fits in with complex early reading processing has not yet been solidified. A review of the literature suggests that current practice seems largely influenced by the notion that increased rate and decoding accuracy will ultimately ensure comprehension. Mathson et al (2006) warn that,

> a misunderstanding of the definition of fluency, or a lack of knowledge regarding all components related to it, may lead teachers to believe that by increasing automaticity, they are working to enhance the comprehension capabilities of their students. Moreover, by embracing a more comprehensive definition of fluency, researchers may focus on methods for training and encouraging teachers to attend to prosodic features in their students' oral reading fluency. (p. 108-109)

With the notion of "embracing a more comprehensive definition of fluency" in mind, the purpose of this study was to seek clearer understanding of the many aspects of fluency found in the oral reading of grade one students and to consider how these aspects of fluency relate to developing mastery of the reading process.

The methodology aligns neatly with Bogdan and Knopp Biklen's (2003) five features of qualitative research, in that it is *naturalistic, descriptive, concerned with process, inductive,* and concerned with making *meaning.* This research is naturalistic in that observations occurred in close proximity to the classroom setting, used running

records, a practice likely to be familiar to the children, and familiar books drawn from their classroom setting. It is descriptive in that data is not reduced strictly to numbers, but rather is reflected in rich, narrative form. Bogdan and Knopp Biklen state that qualitative researchers regard even the smallest piece of data as having the potential to serve as "a clue that might unlock a more comprehensive understanding of what is being studied" (p. 5).The emphasis in this study remains on process rather than on outcome or product, on illustrating the work the children did as they read, and the sound of that reading which carries more importance than the final percentages regarding accuracy. This study is inductive in that it emerges from the bottom up, making inferences and drawing conclusions based on interconnected pieces of collected evidence. It is meaning-making in that it describes in a meaningful, insightful way the data collected from the audio-tapes and Running Records.

The informative value of using running records as a means of exploring children's early reading processes was firmly established in a compilation of earlier studies (Clay, 1982). In one such study that employed running records as a tool for examining the reading acquisition process, Clay states that,

> any learning process which is as complex as reading presents opportunities for missing links, weak links, devious routes where more facilitating ones could be taken, and contrasts between high skills which the child prefers to use and weak skills which s/he tries to avoid. (p. 46)

Running records in that particular study provided unique insight into the variety and discrepancies between different children's reading processes. Clay and Imlach's (1982)

study highlighted the benefits of using running records as a means of detecting the more prosodic elements of children's reading.

More recently, Kaye (2002) indicates that previous studies have focused on isolated aspects of reading, and that there is a lack of information on children's on-the-run read-aloud behavior. She suspects that running records provide a systematic observation tool for capturing and interpreting data from children actively engaged in reading. Also grounded by Bogdan and Biklan's (1998) qualitative theory and methods, she states that in her study, "the researcher is the key instrument for collecting and analyzing descriptive data that have been gathered through intense observation in a natural setting" (p. 57). She demonstrates the continued value of using running records in her qualitative inquiry into the "variety, complexity, and change in second-graders' *on-the-run* reading behaviors" (p. 51).

In addition, some current quantitative research (Ross, 2004) brings running record use into the domain of the classroom, pointing to the correlation between the systematic teacher observation of students' reading and increased student performance. This method, therefore, continues to hold credence not only as a research tool but as an effective formative instructional tool for classroom teachers.

Informed by the above research, this study used running records and audio-tapes as a means of exploring aspects of fluency found in the reading processing of six grade one students. While small studies of this nature may not be considered generalizable, Bogdan and Knopp Biklen (2003) state that their value may lie in the information provided to future researchers, who may investigate how the findings fit into the general scheme of things. Conclusions drawn from this study may help to expand the way other

researchers examine fluency as part of reading acquisition and could lead to larger scale studies. Bogdan and Knopp Biklen advise qualitative researchers to "pick a study that seems reasonable in size and complexity so that it can be completed with the time and resources available" (p. 51). While the number of participants in this study was small, the rich narrative description of aspects of their reading reflects the variety and complexity being sought.

Through detailed descriptions of the oral reading of these students, this study moves toward a clearer understanding of fluency as part of unique individual reading processes. The following questions guided the investigation:

1).What aspects of fluency are observable in the oral reading of six grade one students?

2).What evidence of early reading processing is observable in the oral reading of grade one students?

3.) How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development?

The above research questions echo Rasinski (2006) as he calls for future research into the "full complement of characteristics that define fluency". He states that,

> fluency is an important part of the reading process, and it should be part of any effective reading curriculum. The potential for better understanding reading fluency and, in so doing, improving students' achievement in reading is strong. Let us hope that reading fluency remains a significant variable for theory building, research, and instruction in reading. (p. 19)

Setting

Clay (2002) believes that the first three years of formal learning provide a unique "window of opportunity" for observing the development of children's literacy processes. Their early efforts as they read orally can provide clues about how they are managing the complexity of the task they are undertaking. Many of the behaviors observable in beginning reading disappear and go underground as children become more proficient and independent silent readers. Because we work in a system that expects children to become readers by the end of grade one, it is not only our best opportunity, but our responsibility, to notice whether those processes are developing well or going awry. Clay (2005) states that,

> in the first three years of school, educators have their one and only chance to upset the correlation between intelligence measures and literacy progress, or between initial progress and later progress. Once an active reader and writer have constructed these literacy processes, the critical stage in the formation of a reading and writing action system will have passed. (p. 16)

Therefore, given the urgency of attending to children's reading early, it would seem that a grade one classroom provides an ideal setting for this particular exploration of fluency as part of an early reading process.

This study was conducted in a grade one classroom in one elementary school located in a large suburban school division. This school was selected as representative of many schools in the urban center because it was located in a middle-class area, had a medium- sized student population, and had some cultural and ethnic diversity.

The intent of the study was to provide a rich description of the aspects of fluency found within the individual reading processes demonstrated by grade one children as they read orally. While it was not designed to make connections between the children's reading and the type of instruction being offered to those children in that particular classroom, an interview with the teacher provided helpful background information.

In listening to the classroom teacher, it is evident that reading opportunities, both formal and informal, permeated every part of the school day. The room was filled with a wide variety of trade books, big books, fiction, non- fiction, leveled books, folk tales, author collections, poetry collections, books written by the children, and home reading books. Different types of books are used for different purposes depending on the time of year and needs and interests of the children. At the beginning of the year the teacher interviewed the children on their reading interests and took running records to determine areas of strengths and weaknesses. As the year progressed, she planned small and large group activities, guided reading groups and one-on-one teaching times in order to help the children become more proficient readers. In the interview, she expressed awareness of the need to teach children strategies for reading such as solving difficult words, re-reading, noticing errors, and self- correcting. Through demonstration and practice she taught the students to be aware of the way reading should sound in order to make it enjoyable for the reader and the listener. She particularly commented on the importance she placed on teaching children to read in phrases.

Selection of Participants

The participants in this study were six randomly selected members of the grade one classroom described above. Bogdan and Knopp Biklen (2003) have provided sound

rationale for the value of studies involving a small number of participants. While Cassidy Schmitt's (2001) study of first grade oral reading was larger in scale, her rich narrative descriptions of the reading processes of two particular students and the comparisons between the elements of these processes led to sound implications and conclusions for future research. Choosing six children for this study allowed for enough variety and richness of description to be meaningful and significant. It was possible to see patterns emerging in this sample size that may not have been discernable in a smaller group. On the other hand, a larger sample size might not have allowed for a deep analysis and rich description of the aspects of fluency found within the reading of the children. The reading of each child provided evidence of different degrees and aspects of fluency and diverse reading processing systems.

Participants were selected as follows. Once permission from the school division, the principal, and the classroom teacher was obtained, the teacher sent letters home with all class members explaining the study and asking for permission for the children to participate. The teacher collected all returned letters and deposited all positive responses in a large envelope. From this envelope we randomly drew six letters and these children became the participants in the study. The real names of those students have not been used on any data or in the research paper. Students have been identified using pseudonyms. Every effort was made to keep the names of the teacher, participants, school, and school division anonymous.

Method

Each child was asked to read three short familiar books orally. The observation of the reading of each child took less than ten minutes and occurred in a quiet area close to

the classroom. The observations were conducted at a table with two chairs side by side for the student and the researcher. An audio-tape recorder was set up on the table between the two places.

Once the child was settled and at ease, s/he was asked if s/he was willing to read out loud to the researcher. The child was invited to select three books to read aloud from the five chosen earlier in consultation with the teacher. When the child was ready to begin reading each book, the audio-tape recorder was turned on and the reading was recorded. During each oral reading, a running record (Clay 2002), defined as a "systematic procedure for recording reading behaviours observed during text reading, a tool for recording and then interpreting how children work on texts" (p. 45), was taken. In coding and later interpreting the Running Record, the following suggestion by Clay (2002) was used:

> a Running Record needs to capture all the behaviour that helps us to interpret what the child was probably doing. Everything the child said and did tells us something: when the reading is correct, what his/her hands and eyes were doing, the comments s/he made, when s/he repeated a line of text, and so on. The aim is this: after a Running Record, a teacher should be able to 'hear the reading again' when reviewing the record" (p. 53).

Materials

Prior to the observations, the teacher was asked for five different little story books that each of the six children had recently read with success. As it worked out, each child read different books and no one book was read by more than one child. The books had been recently read, ensuring that the stories were familiar to the child, but not so practised

that they have become memorized. Clay (2005) contends that in reading familiar books, a child has the opportunity to

> practise a range of complex behaviours on a familiar text, and what he does sounds like 'good reading'. This orchestration is best achieved on recently read texts, seen before but not memorized. Fluency, comprehension and speed would be good outcomes from these experiences (Part Two, p. 88).

While almost all of the books were fictional, one child chose two informative texts as part of his reading. Books varied in length and were not always read in their entirety, but in each case I felt that the sample of the reading was sufficient to provide fair evidence of the child's fluency and reading processing system. The books were borrowed from the teacher in order to use in the analysis later. The only other materials used were an audio-tape recorder and Clay's (2002) Running Record forms.

Assessment Procedures and Data Analysis

According to Mathson et al (2006), rate, accuracy, and prosody are all important interconnected factors that play together in reading fluency. They state that

> in order to create meaningful fluency instruction, the view of fluency as automaticity alone must become more comprehensive: It must include accuracy and prosody as well. In other words, simply using one component of fluency—or even two—to determine what makes a reader "good" detracts from fluency and curricular decision making as a whole. (p. 108)

Hudson et al (2005) assert that each of the above factors are clearly connected to the comprehension of text, and set forth the consequences of neglecting the importance of any one area in instruction and assessment:

> Without accurate word reading, the reader will have no access to the author's intended meaning, and inaccurate word reading can lead to misinterpretations of the text. Poor automaticity in word reading or slow, laborious movement through the text taxes the reader's capacity to construct an ongoing interpretation of the text. Poor prosody can lead to confusion through inappropriate or meaningless groupings of words or through inappropriate applications of expression (p. 703).

This study investigated the presence of rate, accuracy, and prosody as they exist in the early reading processes of six grade one students. Data were collected and analyzed from the audio-tapes and running records. The following is a rationale and description of how the data for each aspect of fluency was collected and described. Included are rate, accuracy, and prosody.

1). *Rate* .One major finding of Pinnell et al's (1995) fourth grade study was that speed or rate is a critical aspect of fluent reading, and that reading rate is linked to reading proficiency. Hudson et al (2005) say that rate of reading reflects both automaticity of recognition and decoding at the word level, and speed at which continuous text is read, and suggest that oral reading rate is one important measure of proficiency in reading.

Kuhn and Schwanenflugel (2006) suggest that Rasinski's (2004) *Oral Reading Fluency Target Rate Norms* are a reliable, valid means of assessing and comparing children's reading rates. According to this rating scale, a target rate for grade one students in the spring of the year should be 30-60 words per minute. Hudson et al (2005) recommend 40-60 words read correctly per minute as a goal for grade one students at that time of year. Hasbrouck and Tindal (2006) present the *National Oral Reading Fluency Norms* derived from data obtained from as many as 20, 128 scores in 23 states. This data

showed that in the spring of the grade one year, students in the 50th percentile were reading 53 words correctly per minute, compared to 82 words for students in the 75th percentile and 111 for students in the 90th percentile. These authors maintain that the 50th percentile is a reasonable measure of proficient reading at any given time of the year. Speece and Ritchey's (2005) longitudinal study of 276 first-grade students revealed that students in the at-risk group were reading an average of 22.5 words per minute in May as opposed to their typically achieving peers, who were reading an average of 56.9 words per minute at that point in the school year.

Rasinski and Zutell (1991) present a *Multidimensional Fluency Scale* in which pace of reading is described in four levels including "slow and laborious", "moderately slow", an "uneven mixture of fast and slow reading", and "consistently conversational" (p. 215). Reutzel's (2006) *Scope and Sequence Chart* presents rate as one important fluency concept simply characterized by "reading too fast", "reading too slow", or "reading at 'just the right rate' for the text or task" (p. 79).

In this study, rate of reading was measured by replaying and timing each audio-tape from the beginning to the end of the reading of each story, and later counting the total number of words read correctly during that length of time and converting it to words read correctly per minute. The rate of each child's reading on each different text was compared to Rasinski's (2004) *Oral Reading Fluency Target Rate Norms,* to Hasbrouck and Tindal's (2006) *National Oral Reading Fluency Norms,* and to Rasinski and Zutell's (1991) *Multidimensional Fluency Scale* in order to see how the child compares to other children in his/her own grade. In addition, a description of the rate of the reading allowed comparison to Rasinski and Zutell's and to Reutzel's above descriptors. Although these

categorizations may appear subjective, they provide useful information in combination with the words read correctly per minute.

2). *Accuracy.* Clay (1991) emphasizes the importance of checking on the accuracy of students' reading in order to discover children whose reading processes are not running smoothly enough as they continue to advance through texts of increasing difficulty. She sets forth the serious implications of allowing students to continue reading with many errors as follows:

> Presumably they have needs which are not being met. They are basing their decisions on inefficient cues. They are being moved too fast, prepared inadequately, have insecure strategies, or poorly organized behaviour, or they may have faulty concepts of what is required. (p. 213-214)

Furthermore, she states that if left unchecked, these children will continue to practise errors and use strategies that are not helpful that will hold back their reading as they advance to higher levels. Hudson et al (2005) affirm that the accuracy with which students can either recognize known words or decode unknown words is critical to maintaining understanding of the author's intended message.

Clay's (2002) running records provide an objective means of checking on the accuracy of the child's reading. In this study, the number of running words in each passage of text read by the child was counted. The total number of errors made by the child was divided by the total number of running words in the story, and a ratio of errors to running words was derived. For example, if the child made ten errors in 100 running words, the error ratio would be one in every ten running words. Clay's *Conversion Table*

(p. 66) then allowed this ratio to be converted to a percentage of accuracy. In the instance of one error in every ten words, the accuracy rate would be 90%.

3). *Prosody (modulating the voice, attention to punctuation, reflecting the mental states of characters, and phrasing).* Hudson et al (2005) contend that appropriate rising and falling of the voice, voice emphasis, inflection indicating attention to punctuation, and appropriate use of the voice to indicate the characters' mental states are among the prosodic elements that signal understanding of the text. As such these elements have a reciprocal relationship with comprehension. In reviewing the audio-tapes in this study, I first listened for evidence of these elements and grouped findings into the following categories: modulating the voice (including rise and fall of the voice and emphasis on particular words or groups of words), attention to punctuation, and reflection of the mental or emotional states of the characters.

Hudson et al (2005) also stress the importance of noting appropriate pausing at phrase boundaries. Allington (2006) warns educators to take care in assessing reading fluency solely by measures of word-reading efficiency, and simply states, "I think fluency is reading in phrases, with appropriate intonation and prosody--fluency is reading with expression" (p. 94). Clay (2005) stresses the importance of reading phrases in a grammatical context, saying that "when the reading is phrased as in spoken language and the responding is quite fast, then there is a fair chance that the reader has grouped together the words that the author had meant to go together" (p. 150). Therefore, given the importance of phrasing, my second task was to examine where the phrase boundaries lay in each child's reading and how long the phrases were. In addition, I looked for the types of words put together into phrases and placed these in categories.

Bearing in mind the significance of phrasing, Kuhn and Schwanenflugel (2006) recommend the widely used National Assessment of Educational Progress (NAEP) *Oral reading fluency scale* (1995) as a useful rubric for comparing students' oral reading. This scale describes oral reading at 4 levels in terms of use of expression and the reading of groups of words together in phrases that appropriately represent the author's intended syntax. The first level is characterized by word-by-word reading with occasional short phrases. Some word-by-word reading still exists in the second level, and larger and more frequent groups of words may occur in or out of the context of the author's message. Reading that fits into the third level is mainly phrased appropriately into groups of 3 or 4 words, but often lacks expression. Level 4 is characterized by expression and larger phrase groups that consistently reflect the author's syntax. This scale emphasizes the importance of measuring the length of the phrases, and was used as a guideline for categorizing the length of phrases read by children in my study.

The typed texts of each child's data analysis provided a tool for recording the words read together in groups as the tape was being heard. I listened to each child's tape several times, marking any groupings of two or more words running smoothly together with no noticeable breaks between them. These groupings were regarded as phrases. Places in which I heard small hesitations or breaks between words signified word–by-word reading. Each child's reading was listened to several times in order to come as close as possible to an accurate representation of the phrasing. Although this method is subject to the interpretation of the listener, it provides valuable information in a manner that teachers could emulate on a lesser scale.

On the running record, words read correctly are coded by checkmarks but for the purpose of this study, it was necessary to see at a glance the exact words read by the child. Therefore in addition to the running record, I typed out a transcript of the words read by the students for the purpose of re-listening to the tape, and marking the boundaries of words read together in phrases. Phrase boundaries were coded as follows: (Clucky was looking for food) (to feed) (her babies). It was then possible to determine in each child's reading samples the length of phrases as well as the types of words put together.

Evidence of Early Reading Processing

According to Pinnell et al (1995), "fluency appears to be more than simply the sum of its parts" (p. 52). Mathson et al (2006) alert educators to the implications of "placing each facet of literacy into a separate box" and believe that teachers can only make informed decisions about instruction when they understand not only the elements of fluency, but how they link to other components such as comprehension (p. 116). The purpose of this study was not only to seek clearer understanding of the aspects of fluency found in the oral reading of grade one students, but to consider how these aspects of fluency might be related to other observable aspects of children's reading. It was, in part, an attempt to demonstrate how teachers can become more multimodal in their observations of students' reading by expanding their own observational capabilities. This demonstration necessitated providing a detailed description of each child's reading processing system as evidenced by the running records.

Kaye's (2006) qualitative descriptive study demonstrates that with an audio-taped reading and analysis of children's running records it is possible to categorize the elements

of students' reading processes. She contends that a running record is a systematic observation tool enabling the researcher to capture and describe the rapid, on-the-run reading behaviors that signal a reading process. In her study of second grade reading, she classified data from running records into six major categories: substitutions of words, solving words at difficulty, repetition, omission of words, insertion of words, and other.

Reviewing the actual texts and running records in this study allowed a similar analysis of each child's unique reading process. This analysis included the sources of information used by the child on errors (meaning of the story, the structure of language, or the visual information in the text), attempts to decode or solve difficult words, self-monitoring or noticing of errors, self-corrections, insertions of words into the text, omission of words from the text, appeals for assistance, and repetitions of words and larger sections of text. All analysis of data was validated by another Reading Recovery™ Teacher Leader who possesses the training and expertise to examine aspects of fluency and reading processing systems. While validation by a member of a group is a practice that has sometimes been questioned because of subjectivity, Emerson & Pollner (1988) state that member checks are of value in that,

> they are occasions in which a group encounters a novel phenomenon—a researcher's formulations. The ways to which the responses to a researcher's representation are constructed and expressed—the ways in which members interpret, use or abuse a researcher's version—reveal a setting in new depth and dimension. (p. 190)

In the case of this study, discussion arising from the member's questions and comments served to strengthen my interpretation of the data and deepen my understanding of the topic.

The above method of collecting, categorizing and describing data satisfactorily answered the three questions posed at the beginning of this study. Zutell and Rasinski (1991) claim that being able to listen for and describe the sound of students' oral reading adds a new dimension to our understanding of the beginning reading process. The discussion and implications drawn from this data move forward the notion of clarifying and strengthening teachers' understandings of the connection between fluency and children's individual reading processing systems.

In Chapter IV the results of the data collection will first be connected to the initial research questions.

CHAPTER 1V

Analysis of Data

In this chapter research questions are addressed by presenting an analysis of the data, noting that there are implications for observation, testing, and application in teaching; however, discussion of those implications will occur in Chapter V. This study began with the following questions:

(1) What aspects of fluency are observable in the oral reading of grade one students?

(2) What evidence of early reading processing is observable in the oral reading of grade one students? and

(3) How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development?

In order to answer question 1, a general description of the aspects of fluency found in the reading of all six children is provided, highlighting the differences between the children in rate, accuracy, and prosody noted in their reading. In addressing Question 2, the second section provides a detailed description of each child's individual reading process. In order to set the stage for answering Question 3, it was also necessary in section 2 to describe particular aspects of each child's fluency. It was possible then, in the third section, to bring each child's processing and fluency into the same domain to answer Question 3.

Question 1: Aspects of fluency

Rate

Analysis of the data revealed an extreme range in the average number of words read correctly per minute by the six children; the lowest being 42 words per minute, and the highest being 97 words per minute. The quickest reader, in general, maintained a fast, steady pace, hesitating or pausing only briefly, and then resuming the speed of the reading. He maintained the momentum of the reading from beginning to end. Conversely, the slowest reader assumed a plodding, labored pace, with the flow steadily being broken by pauses, halts, and hesitations.

The reading of the other four children fell somewhere in the middle, with the pace varying throughout the reading. At times, words seemed to flow together smoothly and at other times, word-by-word reading interrupted the flow and slowed the reading down. Although not all reading was what might be called fast and fluent, four of the six children maintained some sort of momentum from beginning to end. Several children demonstrated little bursts of speed in particular parts of the stories, after which they resumed the overall pace. An example of this was where Alyssa read fairly slowly overall, but picked up the pace considerably in describing an exciting chase between two characters. Barriers to speed arose when children made errors and then self-corrected, puzzled over difficult words, waited to be told the word, were not automatic with words commonly found in beginning reading books, or re-read words or groups of words. Table 1 shows the speed or rate of the reading for each child.

Table 1

Rate

Name	Story	Total words read correctly	Time in minutes	Words read correctly per minute	Ave. words read correctly per minute
Alyssa	1	152	3.6	43	60
	2	167	2.1	80	
	3	160	2.8	57	
Bradley	1	157	1.9	83	97
	2	190	1.8	106	
	3	337	3.3	102	
Carly	1	166	2.6	64	55
	2	205	4.6	45	
	3	107	1.9	56	
Danica	1	99	1.5	66	64
	2	147	2.3	64	
	3	171	2.8	61	
Edward	1	164	2.8	59	71
	2	155	2.3	67	
	3	157	1.8	87	
Fred	1	114	2.8	41	42
	2	118	3.1	38	
	3	160	3.4	47	

In Table 1, it is significant that three of the children--Alyssa, Bradley, and Edward --demonstrated high variations in the rates at which they read their three chosen books. Alyssa's middle book featured a chase between two characters, and she picked up the pace considerably during this exciting section of the story, probably accounting for the higher number of words read correctly per minute. Bradley's first book, an informational text, was read more slowly, probably because there were many pages with very little print on each page in addition to very tricky vocabulary and unusual language structures. Edward's third book was much more quickly paced than his other books, possibly because there were several repetitive passages where his speed picked up noticeably. This finding suggests a significant connection between fluency and the type of books children are reading when their reading rate is being assessed. A complete discussion of this issue and its implications for teaching follows in Chapter V.

That issue aside, Rasinski's (2004) *Oral Reading Fluency Target Rate Norms* recommend that the target reading rate for grade one students in the spring of the year be 30- 60 words per minute. Hudson et al (2005) set 40- 60 words per minute as the goal. If speed were the only criteria by which fluency was measured, all six children would fall somewhere into these target ranges. Hasbrouck and Tindal's (2006) study showed that students in the 50th percentile were reading 53 words correctly per minute compared to students in the 75th percentile who were reading 82 words correctly per minute. All but one of the children in this study would be at or above the 50th percentile. However a different perspective is added when considering Rasinski and Zutell's (1991) *Multidimensional Fluency Scale,* in which reading is described as "slow and laborious", "moderately slow", an "uneven mixture of fast and slow reading", and "consistently

conversational". When listening to the audio-tapes of Carly and Fred's reading, my description would match with Rasinski & Zutell's first level, slow and laborious, or with Reutzels's (2006) simple criteria, "reading too slow". Reutzel's description of "reading at 'just the right rate' for the text or task" seems to match with the reading of Alyssa, Bradley, and Edward. Although all children appeared to meet target rates for speed, the sound of some of the reading seems to suggest extreme caution when relying on speed or rate alone to describe fluency. The following sections in this chapter provide other important data that round out the picture of the children as readers.

Accuracy

Clay (1991) emphasizes the importance of checking on accuracy in order to ensure that children's reading processes are developing smoothly, that their reading strategies are secure, and that they grasp the concept of what is required as a reader. Table 2 presents the data on accuracy including errors and self-corrections derived from running records of the children's reading.

Table 2

Accuracy

Name	Story	Running Words	Errors	Accuracy Rate	Self-Correction Ratio
Alyssa	1	163	11	93%	1 in 5
	2	178	11	93%	1in 5
	3	169	9	94%	1 in 2
Bradley	1	161	4	97%	1 in 2.5
	2	191	1	99%	1 in 2
	3	340	3	99%	1 in 2
Carly	1	171	5	96%	1 in 2.5
	2	214	9	95%	1 in 2
	3	108	1	99%	1 in 1.5
Danica	1	106	7	93%	none
	2	152	5	96%	1 in 6
	3	180	9	95%	none
Edward	1	165	1	99%	none
	2	159	4	97%	1 in 5
	3	157	0	100%	1 in 1
Fred	1	121	7	94%	1 in 2.5
	2	126	8	93%	1 in 3
	3	170	10	94%	1 in 4

Clay (2002) suggests that a text that is easy for a particular child is read at 95% accuracy or higher. An instructional text, indicating an appropriate book for the child to learn from, would be read with 90- 94% accuracy. Data from Table 2 shows that the lowest accuracy rate for any book read was 93%, the highest being 100%. Bradley's,

Carly's, and Edward's books all fell into the easy or independent range, and Danica read only one book in the instructional range with the other two being easy. Alyssa and Fred's books all fell into the instructional range. It would appear from the accuracy rates alone that the reading processing systems of these children are developing smoothly. The number of errors and the rate of self-correction, however, suggest that a further look at the reading processing systems of each child is necessary.

Clay (2001) states that self-correction "occurs when a reader misreads a text and, without prompts or signals from another reader, stops and corrects the error" (p. 184). While self- correction is a prized behavior in that it indicates the child's growing attentiveness to the print, every self-correction takes time, interrupts the flow of the reading, and detracts from the efficiency of the process. For this reason she explains that the amount of problem-solving and self- correcting provides learning opportunities for the child when the errors, word- solving and self-correction account for only 10% or less of the reading. Some of the children in this study made a large number of errors. While some errors went unnoticed, the children were aware of others, and they hesitated or paused, causing an interruption in the fluency of their reading. For example, Alyssa made a total of 43 errors in reading the three books. Enough of these errors were self-corrected that the reading remained within the instructional range, but they caused a great deal of hesitancy and pausing. Danica made a number of errors and corrected very few of them, allowing her to read fairly quickly but raising questions about the security of her reading strategies. As in the case of reading speed, accuracy provides valuable information but does not stand alone as an indicator of fluency.

Prosody

Modulating the voice. Clay and Imlach (1982) use the terms *pitch* to describe the rise and fall of the voice and *stress* to describe the loudness of the voice. Hudson et al (2005) speak of emphasis on appropriate words and rising and falling pitch of the voice in response to punctuation. The latter authors also point to the use of appropriate voice tone to reflect the mental states of the characters. Classroom teachers would likely use the more general term *expression* to describe these aspects of children's reading. In listening to the audio-tapes, these elements seemed to fall into a more general category of *modulating the voice*, making it possible to think about how each child used or changed the voice in response to different aspects of the print.

All of the books chosen by the children afforded different opportunities to reveal the events of a story, empathize with the characters, describe a problem, or impart information. The children all responded in different ways and in varying degrees to these opportunities found in the print. Some of the children appeared to be more able than others to adjust or modulate their voices to bring variety and interest to the reading.

Three of the children, Alyssa, Edward and Bradley, seemed very aware of the possibilities offered by the stories to modulate their voices. In many places during the reading, the tones of these children's voices sounded much like the flow of oral language. They appeared to know how reading should sound in order to make it interesting for the listener. While this awareness of audience may not necessarily make them better readers, it may provide evidence that they are thinking about the stories and comprehending the message.

From this point on, phrases or groups of words uttered together by individual children are italicized and will appear in quotation marks. In addition, words that were emphasized by the children or to which I wish to draw attention, will be bolded.

Alyssa read, "*Emily will be sad and that will make me sad*" in a voice that sounded just like normal speech she might use in the classroom or on the playground. Edward read, "*Soon the wheat began to grow*" as if he were revealing an important development in the sequence of events in the story. Bradley demonstrated a conversational, story-telling voice in a fictional text, reading, "*But Black Crow didn't forget Rudy's promise*" as if it were a noteworthy development in the story. He assumed a telling, informative voice on expository text as he read; "*A starfish arm is called a ray*".

On the other hand, the other three children, Danica, Carly and Fred, did not provide as many examples of being able to change their voices to suit the story. Their reading tended to be more flat and monotone, and less varied. Two of these children were so intent on solving problem words that it may have been impossible for them to devote much attention to the way the reading sounded. For example, in one book about a cat searching the city street for a new home, Carly was so focused on reading each consecutive word that she did not take advantage of the opportunity to engage the listener with the plight of the character. Fred, in reading a story about a dangerous barnyard situation with a rat and several little chicks, failed to bring any element of danger or excitement into this voice. It is not surprising that Danica, who is learning English as an additional language, modulated her voice very little.

While there was some evidence of stressing or putting more emphasis on particular words, this was not as common as I had anticipated. Occasionally words that

compared, described, or qualified other words such as "**so** full", ***"long grass",*** "biggest *snowman"*, and *"**too** small"* were uttered more definitively than others. Occasionally an entire group of words was stressed more than the preceding or following words such as in, ***"But that will make me sad"***, and ***"You'll never catch me"***. While some children stressed words in bold print such as ***"Caw! Caw! Caw!"*** and *"Bang! Bang",* other children missed such opportunities.

Attention to punctuation. All of the children were fairly consistent with dropping their voices and pausing at periods, and to a lesser degree at commas. In some cases, jerky, hesitant reading made it difficult to judge whether the child was noticing the commas. There were a few isolated examples of ignoring periods and continuing to read on, stopping at inappropriate places in the middle of sentences. Some children read dialogue in a conversational voice, indicating attention to quotation marks, while others did not appear to notice. One child demonstrated the voice rising toward the end of a sentence with a question mark. Exclamation marks prompted some children to read in a more excited voice while they did not seem to change the reading of others. In general, punctuation seemed to provide a stronger signal to some of the children than to others, but the period seemed to be observed by all children as a signal to drop the voice and stop the reading momentarily. It must be noted that not all books featured the same rich variety of punctuation and dialogue providing signals for the reader to use in modulating his/her voice.

Reflecting the mental states of characters. Alyssa, Bradley, and Edward provided numerous examples supporting Hudson et al's (2005) contention that reflecting the mental or emotional states of the characters is an aspect of fluency. The following

examples from their audio-tapes demonstrate the range of emotions or feelings these children were able to convey with appropriate voices:

- Sympathy (*"started to cry"*)
- Enthusiasm (*"Let's go"*)
- Humor (*"We even wear pink tutus to go roller skating"*)
- Wistfulness (*"But I really want to be Marie"*)
- Fear of being caught (*"Don't tell on me"*)
- Confidence (*"I know what to do"!)*
- Threatening (*"Stay away from my corn or that will be the end of you"*)
- Playfulness (*"I'll catch you!")*
- Agreeableness (*"Okay".)*
- Pensiveness (*"Let me see")*
- Impatience (*"I'm hungry")*
- Resignation (*"Then I will do it myself")*
- Worry (*"We can't move it. It's too big"*.)

It appears from these examples that, provided with an intriguing text rich in dialogue, some children are able to modulate their voices appropriately to reflect the feelings and mental states of the characters.

Phrasing. Data from the audio- tapes of all six children provided strong support for Allington's (2006) argument that reading in phrases is a critical part of fluency, and for Clay's (2005, Part Two) contention that when children group words together in phrases as in spoken language, there is a fair chance that they are grasping the author's

meaning. Clay (2005) adds that phrasing is not precise or predictable (Part Two, p. 151). We can expect then, that different readers may put phrases together in different ways.

Perhaps this lack of precision and predictability contributes to the difficulty in listening for phrases that readers utter. It is helpful, though, to bear in mind that listening for this aspect of fluency is not an exact science, and is open to interpretation. The Cambridge Advanced Learner's Dictionary describes a phrase as "a short group of words which are often used together and have a particular meaning". For the purpose of this study, all strings of words uttered were regarded as phrases. Findings from this data fell into two distinct categories, the length of the phrases and types of phrases.

Each child's phrases were categorized according to the number of words they contained. In order to compare to the NAEP *Oral Reading Fluency Scale* (1995), the phrases were further grouped into two- word phrases, three and four-word phrases, and phrases containing five or more words. It is important to note that none of the children read in a completely word-by-word fashion, and all demonstrated the tendency to group two or more words together in many places during the reading of all stories. Table 3 compares each child's percentages of two-word phrases, three and four-word phrases, and phrases with five or more words. In addition, calculating the total number of words read correctly in phrases, dividing by the total number of words read correctly, and multiplying by 100 enabled me to determine an overall percent of the reading that each child grouped into phrases.

Table 3

Words Read in Phrases-Totals and Percentages for Each Child

	Total # phrases	Total # words read in phrases	Total # words read correctly	% of correct words read in phrases	% of 2 word phrases	% of 3 and 4 word phrases	% of phrases with 5 or more words
Alyssa	119	366	481	76%	40%	49%	11%
Bradley	166	544	684	80%	40%	40%	20%
Carly	114	307	478	64%	55%	41%	4%
Danica	90	250	417	60%	50%	45%	5%
Edward	137	371	476	78%	54%	38%	8%
Fred	87	258	392	66%	46%	44%	10%

As shown by Table 3, the six children used two-word phrases between 40 to 55% of the time. They read in three or four-word phrases between 38 to 49% of the time. The frequency of phrases with five or more words was much lower, between 4 to 20% of the time, with five of the children using this phrase length in 11% or less of their reading. Overall the percentage of phrase reading for each child ranged from 60 to 80%.

In comparing these results to the NAEP *Oral reading Fluency Scale* (1995), it would seem that none of the children would fall into the level 1 category in which reading is mainly word-by-word with infrequent phrases.

The second level of this scale describes readers who read mainly in two-word phrases with some three or four-word phrases (some of which may be awkward and

lacking meaning), with evidence of some word-for-word reading. If adhering strictly to this scale, it would appear that Carly, Danica, Edward, and Fred fall into this category, since they read a higher percent of two-word phrases. It is important to note, however, that there were relatively few awkward groupings of words, and in most phrases it was possible to find meaning. Also, the difference between the percentage of two-word phrases and the percentage of three or four-word phrases was, for most children, quite small.

Alyssa clearly fell into the third level, described by three or four-word groupings, with some smaller groups of words, most of which appropriately represented the author's intended message. Bradley read an equal number of two-word phrases and three and four-word phrases, but it must be pointed out that 20% of his reading was also accounted for by phrases of five or more words. The groups of words used by both of these children seemed for the most part to be meaningful interpretations of the text. Although none of the children fell clearly into the fourth level in which reading is mainly in larger, meaningful groups, a general impression of Bradley's reading was that he is rapidly approaching this category.

Once the number of words in the phrases was determined, I began to look for phrases that could be grouped together according to the types of words they contained. While not all phrases fell into clear categories, several distinct categories emerged.

Many phrases fell clearly into a category in which the phrase began with a preposition such as "***onto*** *the fence*". Another group of phrases clearly began with descriptive words such as "***yellow*** *chicks*". Another group contained an article (*the*, *a*, or *an*) followed by a noun ("***the*** *police*", "***a*** *bite*"). The difficulty with categorizing occurred

in cases where a longer phrase contained combinations of words, such as in "*under the hen house*". This phrase contains all three of the above elements: a preposition, an article, and a descriptive word. Because it seemed important to determine the frequency with which children strung particular kinds of words together, I looked for the number of phrases that contained prepositions, descriptive words, articles, etc. Longer phrases, and in some case sentences, could be counted more than once as they contained several different elements. For this reason, some phrases may be counted in more than one category and the reported percentages will not add up to 100%. I believe that this provides valuable information about the kinds of words that children seem to put together in groups most often. For example, Bradley strung together the words, "*to shells on a rocky wall*" with no hesitation between any words. This seems to be more than a simple phrase as it contains many elements strung together to form a larger thought. This phrase was counted once because it started with a preposition, (***to*** *shells*), again because it contained a second preposition, (***on*** *a rocky wall*), again because it contained an article (***a*** *rocky wall*), and again because it contained a descriptive word with a noun (***rocky*** *wall*). Here we see the interplay between the number of words in a long string and the kinds of words the phrase contains.

The largest number of phrases (29%) began with an article, for example, "***the*** *bike*", "***a*** *man*", and "***an*** *ant*". Some of these phrases were longer and contained several elements such as "***a*** *little red hen*" and "***the*** *little blue horse*".

A significant group of phrases (23%) began with prepositions such as "***under*** *the hen house*", "***onto*** *the fence*", and "***away from*** *the weasel*". Again, some of these

phrases such as "***by** the long grass*" contained other elements such as articles and descriptive words.

The third large group of phrases (22%) began with the name of a character or a pronoun followed by a verb. Examples were "***He** flew*", "***We** wear*", "***Joe** taught*", and "***Ginger** went*". As in previous examples, many of these phrases overlapped with other types as they contained several elements such as "***Rudy** started to eat the corn*".

The other sizeable group of phrases (14%) contained descriptive words such as in "***tall** buildings*", "***good** friends*", and "***little yellow** chicks*". In some examples these phrases stood alone and in others they were embedded in larger groupings such as "*We even wear **pink** tutus*".

The following groupings of words were found to a lesser extent (appearing in 4 to 7% of the word groupings). The word *to* as part of an infinitive appeared fairly often together with a verb as in the phrases "***to** wear*" or "***to** sleep in*", or embedded in larger phrases such as "*wanted **to** catch*". A fair number of phrases either began with or included the word *and*, as in "***and** saw*", "***and** she went*", "*brown **and** red*", or "*faster **and** faster*". A number of phrases were characterized by words that qualify or compare such as "***so** happy*", "***too** much*", "***as** good*", "***many** animals*", and "***all** the corn*". Words that promised to reveal the speaker of a quotation such as "***laughed** Mrs. Mitchell*", "***grunted** the pig*", and "***said** Kovic*", were found fairly often at the beginning of phrases. Possessives such as "***her** babies*", "***your** dad*", and "***their** nest*" began a fair number of phrases or appeared in larger groupings such as "*Sometimes being **your** best friend*". Less frequent but appearing in most children's reading were verbs that were followed by objects such as "***find** something*", "***took** him*", and "***walked** home*". The last

category of phrases was found at the beginning of sentences, and featured words that placed the event in time or built on previous events. Examples were "***When*** *they got", "**But** then", "**Every** summer", and "**Soon** Honey".*

The presence of many combinations of these elements in the larger word groupings (e.g. "*Come and see my new bike*") points to the complexity of categorizing phrases. While it is interesting and important to note the length and types of words in phrases, it is perhaps as useful to speculate on what causes children to string certain words together. It appears from this data that there may be certain kinds of words that act as triggers or signals to the reader to keep going

in order to complete a thought, clarify the author's meaning, or answer a question in the reader's mind. These signal words may help the reader to anticipate what is coming next and to learn more about the character, the action, or the next event. W. Kintsch (1988) argues that based on knowledge of words, language, texts, and the world, readers are able to make remarkable connections to create meaning. He contends that meaning is constructed in short cycles loosely related to phrases or short sentences and that words in these cycles and short cycles within larger cycles come together in the reader's mind to form a mental picture of the author's intended message. This theory may be born out in longer groupings of words such as "*Dad will have a good look at it",* or "*live hundreds of starfish on the ocean floor*". Clay (2002) says that "smart readers ask themselves very effective questions as they read to reduce their uncertainty about what they are reading" (p. 14). It may be possible that particular words signal the reader to ask questions which may help maintain the momentum of the reading and complete these shorter and longer cycles of meaningful reading.

The data suggests that we can expect great differences in the rate of reading of children toward the end of the grade one year. Additionally, it seems that we can expect great variation in the number of errors children notice and self-correct, even though all of the reading may fall into the instructional or easy range. We can expect that children will string varying numbers and types of words together, usually in meaningful ways, to understand the author's message. While they may differ greatly in their ability to modulate their voices or to put words together in phrases, there are common threads that may be found in all of the reading. Rasinski et al's (2006) invitation into the "complex realm of fluency" (p. 3) is supported by the variety and by the common threads found in this data.

While data on the first two aspects of fluency, rate and accuracy, are easily and quite commonly obtained in classrooms, data on elements of prosody is perhaps the most revealing and novel for teachers. It is also the most difficult to gather. For example, for each child in this study, data on rate was easily obtained by timing the reading and calculating the number of words read correctly in that time. Calculating accuracy was a simple matter of counting the number of words read correctly from the text. It is probable, however, that a larger part of my learning about each child came through the analysis of the elements of prosody, each of which demanded many listenings to the audio-tapes. Each area, however, provided valuable information about the children as readers and could not be neglected. No one area stood alone or gave a complete picture of the child's fluency. The temptation in the classroom, however, may be to stop at assessing speed and accuracy without taking a further step to consider the sound of the reading.

As teachers, it is our responsibility to understand why children differ so greatly in their fluency. A closer, more informed examination of each child's reading will help us to understand each child as a unique reader, and to see the route each child is taking toward fluent, meaningful reading. This route may not be identical for each child but there are common threads leading to common goals.

Question 2: Aspects of Processing

Clay (1998) contends that children follow "different paths to common outcomes" in their reading development, stating that beginning readers are "learning to be constructive, problem- solving doers and thinkers, each working towards more complex ways of responding. They initiate, construct, and actively consolidate their learning as they interact daily with their own special worlds" (p. 3). This variety and individuality is clearly demonstrated by the six children in this study.

In order to set the stage for answering Question 3), this section describes both the unique processing systems of each child, and the aspects of fluency each one demonstrated. The children's reading provides evidence that an early reading processing system is observable in the oral reading of grade one students. Each sub-section begins with a brief description of the books chosen by the child in order to understand some of the opportunities and challenges they presented. This is followed by a description of the child's processing system, or the ways in which s/he appeared to be using knowledge to problem-solve and make decisions about the information in the print. This description is based on an analysis of the running records as suggested by Clay (2002). I first analyzed each error, using my best judgment to determine what led the child to respond to the print in that way. I asked myself whether the child was thinking about the meaning of the text,

the structure (syntax) of the sentence to that point, the visual information in the print, or any combination of these sources of information. I then looked for an overall pattern in the types of errors made. Further, I looked for evidence of self- monitoring (checking on oneself or appearing to notice errors), self-correcting, and searching for information in some way in order to solve difficult words. This is followed by a description of aspects of fluency observed in the reading.

Alyssa

Alyssa's first story was about two friends who were playing with a favorite toy when it broke and had to be mended. Large colorful pictures occupied much of the pages, providing support for the text. The font was fairly large and text was laid out in a predictable way with longer sentences spread into two or three lines. Language structures were fairly predictable with few unusual word groupings. The second story bordered on non-fiction, featuring a Northern Canadian family who set up camp on the tundra and witnessed a chase between a rabbit and a weasel. It featured large prominent pictures, large font and carefully chosen vocabulary. The part of the story where the weasel chased the rabbit was designed almost as a map showing the trail of the animals. The third story was about two friends, both aspiring to the lead role in a ballet concert. Large colorful pictures dominated the pages and supported the story text. Although there were never more than two sentences on each page, they appeared in varied places on the pages. Constant page turning was required in order to maintain the flow of the story. Some vocabulary was tricky and unusual.

Although the texts all came out in the instructional range (90-94% accuracy), there were a significant number of errors (43 in total), only some of which were self-

corrected. An analysis of these errors showed that Alyssa often used meaning and structure together, neglecting the visual information (e.g. She read *went* instead of *ran*, an error that retained the author's meaning and the correct structure of the sentence but did not look visually similar to the word in the text). Sometimes on these errors she appeared to notice the mismatch between her attempt and the actual word in the text, and then self-corrected the error. Occasionally she inserted words or omitted words, but maintained the language structure of the text. In one story she missed an entire line and did not notice.

In quite a few errors she used all three sources of information together, retaining the meaning of the story and structure of the sentence as well as being visually very close to the exact word. (E.g. *there's / there*). On some of these errors she self-monitored and re-read to search for more information, resulting in a self-correction.

In each story there were a number of words at which she balked, unable to search for any information, and I told her the correct word. On other words, however, she was able to use the initial sound or part of the word to solve the word successfully.

Although a good number of errors remained uncorrected, there was some evidence of self-monitoring throughout as she hesitated after errors and then went on, repeated the word as if to check it, or re-read a phrase. It was as if Alyssa sensed at times that the reading was not going well, but was not always certain about how to fix it.

One clear example of the complexity of her developing processing system was an error on which she used all three sources of information together. She did not initially notice a discrepancy but after reading the next word, she realized that the sentence structure was no longer correct. In this case, the text read, "*For the tryouts we decide to*" …Her first attempt was *dance* rather than *decide,* ("*For the tryouts we* ***dance*** *to*") but

after reading the word *to*, she realized that the sentence no longer sounded right, and re-read several words, searching for more information to achieve an exact match with the author's message.

While her reading could not be described as fluent, and was interrupted with a fair amount of work, it was my impression that she was building some control over the process and was trying to pull together everything she knew about language, about the stories, and about words. She was actively attempting to solve some of the problems in the text, and read with intense concentration and focus. These positive signs indicated that her processing system was beginning to build in a healthy way.

Alyssa appeared to enjoy the stories, smiling as she began each one. Throughout the books, she seemed to know how reading should sound, and tried to adjust her voice to fit the action. Numerous times, however, she seemed to become tense, pausing, sighing, and taking extra breaths when she came to words she could not solve. She seemed to be more relaxed and able to maintain the pace in the story about the Inuit children.

Her voice dropped consistently and she paused at each comma, stopping for a moment longer after periods. Her voice rose at the end of the sentence, "*Did you see that big weasel behind the rock*?" making it sound like a question.

Some sentences were read with expression, seeming to reflect Alyssa's understanding of the emotion the author intended in the story. She used a sympathetic voice to read the phrase, *started to cry*, and the sentence, *Clare and Amy were very sad. Let's go* was read with enthusiasm appropriate to the adventure the characters were about to embark upon in one of the stories. The excitement in her voice could be heard as she read several sentences about a chase between a weasel and a rabbit. In the third story she

read, "*We even wear pink tutus to go roller skating*" as if this were an amusing part of the story requiring special emphasis. She appeared to relate to the emotion in the story where two friends were competing for the same role in a play and read in a wistful voice, "*But I really want to be Marie*".

There were a few examples of stressing words appropriately so as to make them more important, such as "*a **long** white tail*" and "*The weasel ran **into** the tent*". She stressed the entire sentence in *"**So does Emily"*** and ***"But that will make me sad".***

Alyssa started all three stories in a clear, self- assured voice although she seemed to lose confidence in two of the three stories, when the solving of words grew difficult. There were several examples of sentences that started in a low pitch, gathered momentum reaching a high pitch in the middle, and decreased toward the period, in the way an adult would use the voice to read to a child. She seemed aware of the need to modulate her voice and there were a fair number of bursts throughout the reading in which she sounded like she was talking.

Generally the reading was done at a moderate pace (average of 60 words read correctly per minute) but there were two examples of quickening pace where she appeared to be caught up in the excitement of the story. The flow of the reading was broken in many places by re-reading, self-corrections, inability to solve difficult words, and having to be told words. Occasionally words that should naturally flow together such as *said Mom* were read with pauses between. Several words that are seen often in early reading books such as *would, one, of, soon, could, going,* and *will* were not read quickly and automatically, causing brief pauses. While the reading was not fast, there still appeared to be some momentum that carried her through the stories to the end.

A fairly large number of the words that Alyssa read correctly were grouped into phrases (76%), with slightly more three and four-word phrases than two-word phrases. There were quite a few examples of phrases that contained five words or more. Almost all phrases seemed to consist of meaningful groupings of words. In other words, Alyssa seemed to be naturally putting words together that made sense in the story and sounded structurally correct in the English language (e.g. "*Geela and her family*", "*They always played*", "*our ballet class*", and "*nine little chicks*".)

Bradley

Bradley's first book was an informational text about starfish, richly illustrated with usually only one or two sentences on each page. The print was deceptively large, sprinkled with tricky vocabulary such as "*camouflaged*". The attempt to rhyme sentences sometimes made the language structures awkward and unexpected. Constant page turning was required in order to complete the rhyming patterns. His second book was an informational text about eggs, what they contain, and how they hatch. It was arranged in a non-fiction format with bold-typed questions at the top of the pages and answers below the pictures. It contained labeled pictures, diagrams and insets. Different types of font were used for different purposes. In contrast, the third book was a story of a tricky raccoon that kept stealing corn from an irate farmer. Colorful pictures supported the text. The language was flowing and provided many opportunities to read dialogue. Some pages included speech bubbles and rhymes. Although the print was large, there was a fair amount on each page.

In spite of the difficulty of the two non-fictional texts, Bradley made few errors, a good number of which were self-corrected. All texts were read at 97% accuracy or higher.

When errors were made, my impression was that he was not experiencing difficulty with words, but that his eyes were moving rapidly across the print and from one line to the next. He occasionally inserted articles that allowed the story structure to remain correct, or made errors that retained the meaning and syntax of the story. Often in these cases he would notice the mismatch with the print, self-correct, and then quickly proceed. On several errors he used all three sources of information together, sometimes self-monitoring and re-reading to search for more information, resulting in self-correction.

There was no need to tell Bradley any words, as he seemed to be in control of searching for the information he needed. There was only a slight hesitation before reading the whole word *material*, as if the solving was happening almost on the run. Other difficult words such as *special*, *tortoise*, *camouflage*, and *watery* were read quickly and automatically with no pausing.

On one line with an unusual language structure ("*A spot on its tip tells night from day*"), he made three errors in a row using meaning and structure, self-monitored and re-read to search for more information. Although he corrected one of the errors on the second run, he appeared satisfied with leaving the others. I had the impression that he knew the passage was still not exactly right, but was anxious to keep reading.

On all three texts, Bradley appeared to control the process, self-monitoring his reading, intent on the author's message, and re-reading or self-correcting only when he felt it necessary. It seemed that hesitations or jerkiness in the reading were due not to difficulty in reading the words, but in adjusting to the language structures and unusual layouts of informational text. His processing system appears to be working smoothly as

he reached beyond beginning story books and was adjusting to the new challenges of informative texts.

Bradley approached the different text types with confidence, stating at the outset that, "I'm a good reader. I got all 5's on my report card". He generally maintained the flow of reading in spite of unusual page set-ups and having to turn pages to complete sentences. He was not easily thrown by unusual sentence structures such as "*this keeps the eggs safe from other animals*".

His voice consistently went down at the end of sentences, pausing briefly at commas and slightly longer at periods. On informational text he read headings such as "*Which animals lay eggs*?" as a title, not as a question, appropriate to the oral reading of non-fiction text.

He read phrases such as "*Don't tell on me*" as if he understood the character's worry about being caught. His voice showed the confidence of the character in the story as he read, "*I know what to do*!" He used a shouting, threatening voice when he read, "*Stay away from my corn or it will be the end of you*". "*I'll catch you*!" was read musically and playfully.

He stressed the word *so* in "*he was **so** full of corn*" and all the words in the phrase, "***you'll never catch me***". He read, "***Caw! Caw! Caw!***" in a calling, echoing voice. He seemed able to adjust his voice to the type of text he was reading. Informational text was read in a telling, teaching kind of voice. As he began the story book, however, he adjusted immediately to the different genre, modulating his voice more, and using expression, as a teacher would when reading to the class. He responded to the bold print, reading "**BANG**!" in a louder voice.

Bradley generally maintained a steady, quick pace throughout all the reading (an average of 97 words read correctly per minute), pausing only briefly before reading difficult words and word combinations such as "*cling tightly*", "*ocean floor*", "*hidden homes*", and "*camouflaged*". There were some hesitations where he appeared to be checking on himself or where he was puzzled by an unusual word arrangement such as "*Even if enemies do attack*". The hesitations and pauses were only brief, and then the pace of the reading was resumed. He rarely paused or stumbled on high frequency words and appeared to control a large reading vocabulary. The momentum of the reading was generally maintained from beginning to end. There were no long, drawn-out pauses to solve words. He seemed to feel the rhythm of the rhyming format in one of the stories.

A large number of the words read correctly were grouped into phrases (80%), with an equal number of two-word phrases and three and four-word phrases. However, a large number (20%) of the groups of words he read together contained five words or more, contributing to the impression of smooth reading overall (e.g. *"Whether you call them starfish or sea stars"*, "*As Mrs. Mitchell drove home"*, and *"When it was really dark"*). There were several examples of reading an entire sentence with no perceptible hesitations between words (e.g. "*A starfish arm is called a ray*", "*But Black Crow didn't forget Rudy's promise"* and "*How do animals take care of their eggs?")*. In these cases, words seemed to flow one into the other, the way they would in normal speech.

Carly

Carly's first book was a story about a homeless kitten wandering about the streets looking for a place to live. It was richly illustrated with rather large font, placed in predictable places on the pages. The language structures were fairly straight-forward and

the vocabulary was not unusually difficult. The second book was about a child who sets out to prove herself by making the biggest snowman in the world. The font was comparatively small, and was sometimes placed in unusual positions on the pages. There were several difficult names and some tricky vocabulary combined with some unusual language structures and less picture support. The third book bordered on non-fiction and was about a little girl looking at clouds and seeing shapes in them. The book had relatively few words, with the illustrations being of prime importance. However, the font was slightly unusual and some combinations of words were tricky such as *lightning flash* and *thunder rumble.*

Although all of Carly's books came out in the easy range (95-100% accuracy), the reading in all books contained many errors (32 in total), slowing the reading down as she hesitated, re-read, and self-corrected.

Many of her errors indicated that she was strongly led by structure, that is, she uttered the next word that would naturally be spoken in the language before she had looked carefully at the print (e.g. *a* instead of *the, the* instead of *my, of* instead of *and*). While she did self-correct many of these errors, this extra work detracted from the flow of the stories.

She used all three sources of information (meaning, structure, and visual) together on some errors, achieving a close match to the word on the page. On one such error, she read, "*They look like giant crossing the sky",* realized that the sentence did not sound right, and re-read from the word *giants,* self-correcting the error. In one further example the text read, "*Sam's snowball hit a wooden fence".* On the word *wooden,* she began to say "*win*"-(window), but caught the error even before she completed the word. This self-

monitoring and further searching provides a glimmer of the control she was beginning to develop over the reading task.

Carly occasionally used visual information alone on an error, reading "*Mmm said it will rain today"* rather than *"Mum said, It will rain today"*. While this error remained uncorrected, she did self-monitor a second error in which she read, "*In the spring Annie hat"* and immediately changed *hat* to *hit,* indicating that she was thinking about the meaning of the story.

She generally attempted all difficult words and rarely waited to be told. On one occasion she made two attempts at a word, searching for the right match. My general impression of Carly's reading was that her processing system was developing in a somewhat inefficient way. Although there were some hopeful signs, it seems that she was still neglecting to attend carefully to the print on the first attempt and therefore has to do the extra work of self-correcting. This slows the reading down, and makes it less enjoyable both for her and for the listener. She read all three books in a rather detached voice, as if she had no emotional stake in the stories. This could reflect her usual approach to reading, or it could have been due to the choice of these particular books.

Overall Carly's approach to reading the stories appeared tentative, hesitant, and disengaged. It seemed that reading was a job needing to be completed and not something that she enjoyed doing. She did not often glance at the pictures or appear to be reacting to the emotion of the characters. She sighed and appeared frustrated a few times when the reading became harder.

She did not consistently drop her voice and pause at periods. Sometimes she would stop very briefly at periods, but sometimes would slide right through into the next

sentence. It was difficult to tell if she was attending to punctuation because there were so many pauses and hesitations in other parts of the text. Her voice did go up once on the question, "*Will it be fine tomorrow*?" She did not take advantage of opportunities for expression signaled by exclamation marks as in "*Bow, wow, wow*!" and "*Splat*!"

Although the books she selected did not contain a great deal of dialogue, there were some opportunities to show engagement with the plight of the character, as in the story of the homeless cat. However I did not hear in her voice that she was drawn into the emotion in the stories.

She occasionally stressed words such as "*the **biggest** snowman*" but there was generally little modulation in her voice. Occasionally she showed some expression as in "*Wait for me*" and "*Okay*". In most of the reading her voice quality might be described as monotone or flat.

Generally, the pace of the reading was rather slow (averaging 55 words read correctly per minute), although she gained some momentum occasionally. The reading was stilted, jerky and hesitant overall with many interruptions to solve words, re-read, and self-correct. Most of the reading did not flow smoothly. There were some confusions and hesitations on words often seen in early reading books such as *house*, *said*, *and*, *one*, *three*, and *at.*

While a fair number of correct words were grouped into phrases (64%), the word groupings were separated by other stretches of word-by-word reading. Two-word phrases such as "*she looked*", "*His friends*", and "*very dark*" accounted for 55% of all the groupings she read. She did, however, put words together in groups of four 41% of the time (e.g. "*I saw big clouds*" and "*I heard the thunder*"). She rarely read more than four

words together in a group. Some of the word groupings stopped short of completing a meaningful thought or did not seem to fit together (e.g. "*and went to the*", "*and I am*", "*rain today*", and "*her out*").

Danica

Danica's first book bordered on non-fiction as it described all the things a boy needed to do to help his dog grow up to be healthy and strong. It contained large photographs and was written in a large font. There were several short sentences on each page, written in fairly straight-forward language. The second book was about two friends who go to the school fair and are deciding how to spend their saved-up allowances. It featured supportive pictures and fairly large font. Dialogue between the children offered opportunities for reading expressively. The third book was about a boy who was frightened taking his first plane trip to visit his Dad in another city. The text was supported by colorful pictures and was arranged on the page uniformly throughout the book. As in the second book, new sentences always began at the margin and there were occasional spaces between sentences.

The errors in Danica's running records reflect a different approach to the reading task and point out some areas of concern that are addressed in the last section. One story fell into the instructional range and the other two were in the easy range. Only one error in all the reading was self-corrected.

Many of Danica's errors showed that she used meaning and visual information, but neglected structure. (E.g. She read, "*Honey grow bigger and bigger*" rather than "*Honey grew bigger and bigger*" and "*Kel mother*" rather than "*Kel's mother*"). Because she is just learning the structures of the English language, these errors likely did not

sound wrong to her and they remained uncorrected. She sometimes skipped over periods, dropping her voice and stopping at inappropriate places in the middle of sentences. In these cases she did not appear to notice that the sentence no longer made sense, and she proceeded with the reading.

When Danica encountered an unknown word, she did not glance at the picture, searching for meaning as many beginning readers do. She carefully searched the visual information in the word, sometimes putting a word together successfully (e.g. *cab-in, run-way, pi-lot*). Other attempts to decode words were almost correct (e.g. *plan* instead of *plane, cur* instead of *care,*
al-o-ans instead of *allowance*). Although she appeared unsure about the correctness of these words, she did not appeal to me for confirmation. She rarely glanced at the pictures as a means of checking her attempts.

In the story about Joe, the boy, and Honey, the dog, she read "*Joe and Honey still like to be brothers"* rather than *"Joe and Honey still like to be together"*. Her limited control of the language did not allow her to self-monitor this error and search for a word that made more sense.

My general impression of Danica's reading was that she is building a processing system that is slightly out of balance. She has become a fairly quick reader and a surprisingly successful decoder, without understanding the need to check that the story is making sense and sounding right. Even when the words were being read correctly, I was not convinced that she understood the message of the author. She was very willing to read, and was intent and focused, but it seemed that her idea of reading was to produce a word for every word on the page, regardless of the meaning.

In addition to learning how to read this year, Danica is facing the challenge of learning English as an additional language. Observations on her fluency and processing system are made with the understanding that she cannot yet control the English language well enough to bring certain aspects to her reading.

Her voice went down slightly at the end of many sentences and she paused before continuing on. Occasionally, however, she would continue reading through the period and stop at an inappropriate place in the next sentence, not seeming to notice that this jeopardized the author's meaning.

Although two of the stories she chose contained dialogue and presented problems for the characters, I did not hear in her voice any evidence of reflecting the emotion of the text. She did not appear able to change her voice to make the stories sound more interesting. Most of the words were read in a clipped, flat tone, with little modulation or expression, and I did not hear her stress any particular words.

Danica read an average of 64 words correctly per minute, and kept up the momentum to the end of each story. The reading was jerky, hesitant, and word-by-word in many places, but she maintained a fairly steady, consistent pace throughout, with no long pauses, and a few brief bursts of speed. She appeared to control a fairly large reading vocabulary and did not often err or hesitate on words common to early reading books.

Sixty percent (60%) of the words she read correctly were read in phrases. Although more of the phrases (50%) consisted of 2 words, she also read a fair number of words in three and four- word groupings. Very few groups of words contained more than four words. A fair number of the phrases fell short of being meaningful (e.g. *"bigger too", "been to", "still like", "plane before", "Honey to sit"*). On the other hand, she

seemed able to put some groups of words together in the way the author might have intended (*"for two weeks"*, *"in another city"*, *"on the plane"*).

Edward

Edward's first story was about a talking tow truck and his owner who venture out in a storm to remove a tree that has blown across the road. The colorful pictures were fairly supportive of the text and the font was quite large and consistently laid out above the pictures. All sentences started on a new line. The book provided many opportunities to read dialogue between the two characters. The second story was about a hungry monster that knocked on a sleeping family's door, demanding breakfast, and when no one answered, set off to find food elsewhere. The book featured unusual cartoon style pictures and print layouts. The font was relatively large and there were numerous quotation marks where the monster was speaking. The third book retold the familiar story of the little red hen. It was written in fairy tale fashion, featuring large colorful pictures that supported the text, fairly large font, and straightforward language structures. Some sections were repetitive, allowing the reader to become familiar with the language of the story.

Edward read all three books at 97% accuracy or higher, making very few errors and self-correcting several of them. Almost all errors showed the use of all three sources of information together (e.g. one repeated error in which he read *gobble* for *gulp.* On one such error where he read *sleeping* instead of *asleep*, he noticed the error immediately, searched for more information, and self-corrected. In another example, where the text read, *"I must water the wheat"*, he began to read *this* for *the*, and caught the error before he finished speaking the word.

Edward did not show a great deal of evidence of having to search for information during the reading, although on one difficult word, *shone*, he paused momentarily, looked carefully at the word, and solved it, resuming the pace of the reading. In order to solve the word *myself* in "*Then I will do it myself*", he read *my*, then re-read several words before completing the word successfully. He did not appeal for help or wait to be told at any time.

It seemed throughout the reading that Edward was carefully self-monitoring, alert for errors, and independently doing the work needed to solve the messages of the text. There were many times when he glanced at the pictures as if to confirm that what he read corresponded with the illustrations. His attention to expression and phrasing led me to believe that he not only enjoyed these stories, but understood the way in which the authors intended them to be read.

Edward appeared to be interested and engaged in the stories he was reading. Although the reading was slow, there were many times when he seemed to show an understanding of the way the author might have wished the story to be read. He maintained the momentum of the reading throughout.

His voice consistently dropped down at periods, and he paused at the end of sentences. He seemed to notice quotation marks as a signal to make his voice sound like the character was talking. "*Who will help me*?" and "*Is that good to eat*?" were read as questions, with his voice rising toward the end of the sentence.

Many quotations were read in a way that reflected the mental state or emotions of the characters. *Mm-mmm* and *Let me see* sounded pensive. "*Give me some food*" and "*I'm hungry*" sounded impatient and demanding. "*Then I will do it myself*" and "*Very well*"

reflected the determination and resignation of the Little Red Hen and the hungry monster. Understanding of the problem in one story was reflected as he read, "*We can't move it. It's too big*", in a worried voice. He emphasized words within phrases as if to show their importance in the story. Examples were: "***That** looks like the **spot***", "***No**, B.J.*", and "*I'm **hungry***", "***and** she did*", and "*he saw a **letter box***". He seemed to be aware of the effect of modulating his voice throughout the stories. He read "*Bang! Bang!*" in a loud voice. "*Zzzz! Zzzz!*" imitated the noise of a chainsaw. "*Wake up. It's morning*" sounded like the monster calling through the door.

Although the pace was slow at times, it picked up in places where there was repetition or familiar language such as "*Once upon a time there was a Little Red Hen*" The reading in the fairy tale flowed more smoothly than in the other two stories which were jerkier and slower paced. Edward's ability to read the fairy tale in a manner that more closely resembled talking was reminiscent of the pre-school readers in Sultzby's (1985) study. Her research showed that even pre-schoolers who were not yet reading in a conventional manner were able to imitate in their "reading" some of the wording and intonation patterns used by the adults who had previously read the children's favorite stories aloud. Related to the pace of the reading, Edward seemed to know a large number of high frequency words but was not always quick and automatic in producing them, resulting in slight hesitations in many places.

A large number of correct words were grouped into phrases (78%). Many of these phrases consisted of two words (54%) while 38% of the phrases were composed of three or four words. Some groupings contained more than four words (e.g. "*to swim in the pond*", and "*he saw a letter box*"). Occasionally he read entire sentences in a smoothly

flowing manner with no noticeable breaks between words (e.g. "*Then I will do it myself*". "*Soon the wheat began to grow*". "*Who will help me?*"). Many of the word groupings seemed to reflect the way in which they would be uttered in speech ("*Let me see*", "*to have a look*", "*Mum and Dad*", "*We will have*").

Fred

Fred's first story was about a mother hen trying to protect her chicks from a rat lurking in the farmyard. Large colorful pictures supported the text. The print was consistently laid out above or beside the pictures and the sentences began at the margins. The font was fairly large and there were no unusual challenges in vocabulary. The second book was a retelling of an old fable about a kind dove who tries to rescue an ant from a pond. Large colorful pictures dominated the pages, with print above or beside the pictures. Some of the language structures were literary and potentially tricky. The third book was about a father fixing up his daughter's broken old bike to give to a younger friend. Pictures were supportive of text, with a fair amount of text beside or above the illustrations. This book featured many opportunities to read dialogue between the characters.

All three of Fred's books were read at 93% accuracy or above. However, even though the reading fell into the instructional range, there were a large number of errors (37 in total), many of which were left uncorrected.

On many of the errors, he used meaning and structure together, (e.g. *watching* instead of *sitting* in "*The farm cat, who was **sitting** on the fence*"). Sometimes he noticed the mismatch with the visual information and self-corrected and other times he did not appear to notice the discrepancy.

On some of the errors he used structural information alone as when he read *the* instead of *a*, and *she* instead of *it.* A number of times he omitted words that allowed the structure of the sentence to remain correct. (Eg., He omitted *little* in "*Hannah's little blue bike"*). It was not clear whether he did not notice the omitted words or whether it had become a habit to leave out words he found difficult.

Sometimes he used all three sources of information together on errors, (e.g. *couldn't* instead of *could not*) and in this case he self-monitored the error, and searched for and used more visual information, resulting in a self-correction.

There were a fair number of times when he needed to be told the word, either because he made an unsuccessful attempt and knew he was wrong but could not solve the problem, or because he could not make any attempt to unlock an unknown word.

It appeared at times that he was losing the meaning of the story as in the following example. The text read, "*But the farm cat, who was sitting on the fence, saw the little chick"*. He read, "*But the farm cat, who was sitting on the fence,* ***was*** *the little chick"*. In this case, by the time he reached the end of the sentence, he had faltered so many times that it was difficult for him to notice that it no longer made sense.

My general impression was that reading at this level of text is a difficult task for Fred, and that he is not feeling very successful at it. Reading appeared to be a word-solving problem for him rather than one of meaning making. The reading was broken up throughout with constant errors, self-corrections, and re-reading.

In many places during the reading, it sounded as if Fred was struggling, although there were some bursts of speed where he seemed to be finding the reading easier. He occasionally became frustrated, and had to be encouraged to go on with the reading.

His voice usually dropped at periods and paused between sentences. However there were so many pauses in other places that it was difficult to judge whether or not he was attending to the punctuation. He occasionally stopped at the end of a line as if the sentence were over, even though it carried over to the next line.

Although the stories all offered opportunities to sympathize with the plight of the characters, it was difficult to observe from Fred's voice that he was engaged with their feelings. He did occasionally stress words, indicating his understanding of the author's message, as in "*My old one is **too*** small", "*Alex was **so** happy*", and "*by the **long** grass*". In many places it seemed that he was so intent on solving each word that he was unable to think about how his reading sounded. His voice modulated only slightly and there was very little use of expression to reflect that he understood the author's message.

Generally the pace of the reading was slow and labored (an average of 42 words read correctly per minute), with little flow and smoothness. In a few places where the language may have been familiar, there was smoother, less effortless reading (e.g. "*Once upon a time there was an ant*" and "*Dad is good at fixing things*"). Mostly the reading was choppy and faltering with many pauses at difficulty. A good number of high frequency words did not appear to be solidly within his grasp and caused numerous hesitations (E.g. *was, saw, in, up, on, would, could*).

A fair number of the words read correctly (66%) were grouped into phrases, with the number of two-word phrases being only slightly higher than the number of three-word phrases. A small number of the groupings contained more than four words (e.g. "*to get a drink of water*", "*to look in the shed*", and "*were walking around the farm*"). Once he read an entire sentence smoothly and without any noticeable breaks between words ("*Dad*

will have a good look at it"). Many of the phrases appeared to be strung together in a way that reflected meaningful speech utterances (e.g. "*to help the ant*", "*a chick to eat*", and "*the cold water*").

Question 3: Describing Fluency and Processing Together

The preceding analysis of each child's reading suggests that aspects of fluency mingle with individual reading processes in such a way that it is difficult to describe one without considering the other. It is not the purpose of this study to determine whether the aspects of fluency help to drive the reading process forward, or whether fluency is an outcome of successful reading processing. Data, however, seems to suggest the importance of considering each child as an individual with different aspects of fluency working together with processing. Each child appears to be following a unique path, reflecting differing degrees of engagement with the text, ability to interpret the story in a way that reflects understanding of the author's message, ability to check on his or her own reading, ability to search for the information needed to read the author's precise message, and speed with which all of these aspects are accomplished. Not only does an examination of each child's processing round out the picture of the child as a reader, it helps to explain why the child's reading does or does not sound fluent. Conversely, noting places where the reading sounds fluent may provide the listener with clues as to where the process is working well and things are in balance. The following three tables summarize the data for each child. Table 5a shows rate and accuracy for each child. Table 5b shows how each child used his/her voice and read in phrases. Table 5c shows the evidence of each child's processing.

Table 4a

Rate and Accuracy

Rate and Momentum							Accuracy	
Name	Read slower & more laboriously with longer pauses & hesitations	Read at a moderate pace interrupted by pauses and hesitations	Read at a quicker pace with pauses and hesitations	Read at a quicker pace with few pauses and hesita-tions	Maintained some momentum throughout reading	Read in a smooth flowing way in many places	Number of books read at 90-94% accuracy	Number of books read at 95-100% accuracy
Alyssa		x			x		3	0
Bradley				x	x	x	0	3
Carly	x						0	3
Danica			x		x		1	2
Edward		x			x		0	3
Fred	x						3	0

Table 4b

Use of Voice and Phrasing

	Use of Voice				Phrasing			
Name	Stressed particular words in numerous places throughout the reading	Reflected emotion or mental state of characters	Changed voice in response to punctuation	Modulated voice through-out to reflect author's message	Read many 2-word phrases	Read many 3 & 4-word phrases	Read many phrases with 5 words or more	Main-tained meaning and syntax in most phrases
Alyssa	x	x	x	x	x	x		x
Bradley	x	x	x	x	x	x	x	x
Carly			x		x	x		x
Danica					x	x		
Edward	x	x	x	x	x	x		x
Fred			x		x	x		x

Table 4c

Evidence of Processing

Name	Most often used meaning and/or structure on errors	Often used visual information alone or in combination with meaning	Used all three sources of information together on most errors	Self-monitored fairly consistently	Re-read words or groups of words	Self-corrected a large number of errors made	Searched for information at difficulty fairly consistently
Alyssa	x			x	x		
Bradley	x			x	x	x	x
Carly	x			x	x	x	x
Danica		x			x		x
Edward			x	x	x	x	x
Fred	x				x		

While Alyssa read at a moderate pace, maintained momentum, and demonstrated many desirable aspects of fluency, she most often used only meaning and structure on her many errors, neglecting visual information. She noticed a number of errors but did not know how to search for the information needed to correct them. At difficulty she often did not know what action to take in order to solve the word.

Carly self-monitored her reading fairly consistently, re-read groups of words, self-corrected many errors, and searched for information at difficulty, but accomplished all of these aspects in a slow, laborious manner with many pauses and hesitations. In addition, she rarely modulated her voice to reflect the message of the author.

Danica read at a moderate pace and maintained some momentum but did not modulate her voice to suit the story. Many phrases did not maintain meaningful syntax. She often used visual information alone or in combination with meaning, neglecting the structure, and did not self- monitor her errors.

Bradley and Edward demonstrated many desirable aspects of fluency along with processing systems that were developing in a positive way. This seems to indicate that both children were proceeding nicely along the path to fluent, meaningful reading. It must be noted, however, that Bradley's books were much more difficult than Edward's and that his reading was much faster, smoother, and less interrupted.

The reading of all six children provided evidence that teachers need to look at the child's reading from as many vantage points as possible in order to understand the individual path each child is taking. Measuring rate, accuracy, and elements of prosody in

combination with an analysis of the child's unique processing is essential in order to understand how to help the child develop further as a reader.

Summary of Findings

The data analysis provided the following answers to the research questions:

(1) What aspects of fluency are observable in the oral reading of grade one students?

This study revealed that children differ widely in rates of reading, ranging from slow and laborious production with pauses and hesitations, to smoothly flowing production with

few breaks and interruptions. Coupled with accuracy, rate provides a perfunctory glimpse at the child's fluency. Elements of prosody, including use of voice and phrasing, are more difficult to capture but lend an additional perspective about the ways children comprehend and interpret the author's message. This study revealed a wide range of ways in which children stressed words, reflected the emotion or mental states of the characters, changed their voices in response to punctuation, and modulated their voices throughout the reading.

Furthermore, an analysis of the phrases uttered by the children in this study revealed that there was an absence of complete word-by-word reading, and that regardless of the speed or accuracy, all children strung some words together into phrases of varying length. Many phrases appeared to be signaled by particular types of words, for example, prepositions, descriptive words, articles, and characters' names or pronouns. Longer utterances contained many of these elements strung together. Most children's phrases retained the meaning and syntax of the author most of the time.

(2) What evidence of early reading processing is observable in the oral reading of grade one students?

Analysis of the running records revealed a wealth of information about the children's reading that complemented and balanced the descriptions of the children's fluency. It was possible to observe the unique routes the children were taking in their efforts to read and comprehend the author's message. The children appeared to be bringing their own knowledge of books and of the world to bear in slightly different ways as they used the visual information in the text. Some appeared to be relying more heavily on meaning and structure, without immediately considering the visual aspects of the print, while others more closely approached the exact text in their errors. Some noticed these errors fairly consistently and searched for ways to rectify them, while others continued on, either unaware of the errors, or unable to correct them. Some searched for ways to solve difficult words while others waited to be told, seemingly unable to take effective action. All children re-read bits of the text at times, seemingly checking on themselves or searching for the information needed to complete the author's message.

(3) How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development?

This study contends that a description of both fluency and reading processing is critical to the understanding of his/ her individual reading development. While time consuming and possibly difficult, it is only through considering these two aspects together that a complete picture of the child as a reader is achieved. The above descriptions of each child's reading showed that it is indeed possible to bring fluency and

processing together into one domain. In doing so, it appears that statements within the description are often characterized with a "but", indicating that while one area may be developing nicely, another area may be of concern, pointing to a possible direction for future teaching. For example, a description of Carly's fluency added another perspective to what might appear to be efficient reading processing, and it was only in describing the two aspects together that some concerns emerged.

Discussion and implications of these findings follow in Chapter V.

CHAPTER V

Discussion and Implications of the Study

With roots as far back as colonial times in North America, oral reading has played an important role in the school curriculum as a means of assessing children's reading development. Eloquent, artistic delivery of text was highly valued in the early days of education and has continued to the present day to be one indicator of the child's ability to interpret the author's message. In addition, elements of rate and accuracy have come to be commonly regarded as benchmarks for reading success. These attributes have received differing amounts of attention in studies of fluency, depending upon each researcher's particular theory of the reading process. While research has shaped and transformed the concept of fluency, and it is now widely accepted that fluency plays a key role in the understanding of text, disagreement on best instructional practice still exists. In classrooms, great differences in children's fluency become evident as early as the grade one year, and continue to pose a puzzle for teachers and researchers as children grow older. Many prominent researchers (Allington, Pikulski & Chard, Rasinski, and Samuels) have called for further exploration of this critical aspect of literacy.

This study was motivated by personal observations of the oral reading of grade one students, and began with the hypothesis that aspects of fluency are observable very early in children's reading development. I suspected that fluency was a multi-faceted concept and related to other aspects of children's reading development. Supported by the complex reading theories of Clay and Rummelhart, my goal was to find evidence that fluency can be found in early reading, and that it exists within each child's unique reading process. My questions at the outset of the study were:

(1) What aspects of fluency are observable in the oral reading of grade one students?;

(2) What evidence of early reading processing is observable in the oral reading of grade one students?; and

(3) How might the fluency and reading processing of these grade one students be described in a way that contributes to a clearer understanding of fluency as part of early reading development?

Audio-tapes and an analysis using Clay's (2002) running records revealed that the six grade one children who participated in this study differed greatly in the rate and accuracy with which they read stories. They demonstrated varying degrees of attention to elements of prosody such as using the voice to reflect the emotion of the characters, stressing particular words, and modulating their voices. All children uttered many words together in phrases although some read in phrases more consistently, and strung more words together in those phrases.

In addition, information on each child's individual reading process was derived through an analysis of the running records of text reading. Examining the children's errors, self-corrections, and reading behavior at difficulty clearly showed the degree to which each child was able to self-monitor the reading and to search for and use the information in the text, as well as individual knowledge of language and of the world.

Describing reading fluency and processing together was made possible in a general overall statement about my impression of the sound of each child's reading as well as the way in which s/he worked on the text. These statements were tentatively positive, noting what seemed to be working well, but also what seemed to be lacking in

the reading. The following discussion highlights some findings of particular interest and considers how these findings connect to literature and research on fluency.

Discussion

Clay's (1998) depiction of children following different paths to common outcomes was born out in all aspects of this study, as each of the six children demonstrated unique and individual ways of responding to print, both in their fluency and in their developing reading processes. Echoes of the literature on rate, accuracy, prosody, and reading process could be heard in all the audio-tapes and seen in the running records. This section considers the findings of my study in the light of this literature, and attempts to reconcile my present understanding of reading development with what we have already learned about fluency.

As in Speece and Ritchey's (2005) study, there was evidence of a wide range of reading rates from child to child. While I anticipated these differences, I did not expect to hear in some of the slower reading an element of momentum, which I interpreted as indicating some engagement, comprehension, or interest in moving ahead with the events of the story Clay (2005, Part Two) contends that, "the competent reader drives forward through an interesting text making speedy responses" (p. 115). Although Alyssa's and Edward's reading was not speedy and the problem-solving of difficult words was not quick and effortless, I sensed that they each knew where their stories were headed, and that they were bearing the authors' meaning in mind as they moved forward. This suggests that we may need to search for ways to describe rate beyond the number of words read correctly per minute, in order to judge how fluent the reading is. *Momentum* may be a term worth considering. While rate or momentum provides only a partial picture

of the child's fluency, the range demonstrated by children in this study certainly suggests that rate is an aspect not to be overlooked. It may be helpful to examine more closely the types of words that are consistently slowing the individual reader down. Fred's reading, for example, was punctuated with numerous pauses before reading high frequency words that he would have encountered many times before reaching the level of text at which he was now working. The benefit of automaticity in producing known words or the ability to decode unfamiliar words quickly and effortlessly (Adams 1990, Stanovich 1986, and Perfetti & Hogaboam 1975) is demonstrated in the reading of Bradley. The efficiency of his reading echoes Kaye's (2005) demonstration that proficient readers solve problems quickly and on-the-run. Finally, it seems to be important to consider not only the overall number of words read per minute, but places where the reader slowed down or picked up the speed. Alyssa, for example, read an uncharacteristic 80 words per minute in one story, but she sped through some very familiar passages, raising the number of words read correctly per minute, while the rest of the reading was rather slow. I believe that this points to the necessity for caution in relying strictly upon the number of words read correctly per minute as an indicator of fluency.

Kame'enui and Simmons (2001) state that, "fluency as an index of sheer speed without accuracy is a reckless indicator of processing, cognitive or otherwise" (p. 206). If instructional emphasis is placed upon speed alone, there is danger of creating a social setting in which students, rather than developing an intrinsic love of reading, may attempt to please the teacher with sheer speed. Furthermore, the teacher may miss critical information about the child's reading process if relying on speed alone as an indicator of success.

The data on accuracy pointed indirectly to some serious concerns about the ways in which some of the children were working on the text. All children in this study read within the instructional to easy range (90-100% accuracy) but some children made many more errors than were appropriate to the level of text they were reading. While some of these errors were noticed and corrected, many were left uncorrected, indicating that the children were not always checking on their reading and searching for ways to solve problem words. This pointed out that it is possible for children to remain within the instructional to easy range while still struggling with certain aspects of the text, suggesting that we cannot stop at deriving rate and accuracy and must be vigilant with checking other aspects of the children's reading. It is helpful to bear in mind Clay's (2001) warning that there can be too much problem-solving and self-correcting even on instructional text. There is a point where this reading work becomes counter-productive, slowing down rather than moving the reading process forward, as evidenced by Carly's running records. In one book, over 10% of her reading involved error, self-correcting, or problem-solving even though the end result showed a 95% accuracy rate.

As with rate and accuracy of reading, there were great differences in the aspects of prosody detected in the children's reading. At the outset of the study I anticipated that the audiotapes would reveal varying degrees of attention to punctuation, stressing of particular words, expressiveness, and ability to string words together in phrases. All of these aspects did appear, but none as clearly as the length and types of phrases the children used. Allington's (2006) equation of fluency with phrased reading resonated as I began to count and categorize the large numbers and types of words the children chunked together. Most revealing was that the majority of the phrases uttered showed some

awareness of the way words would naturally be spoken together in the English language. Edward's reading of (*She lived*)(*on a farm*)(*with a duck*)(*and a dog*)(*and a pig*) is a case in point. While Danica's control of the English language is still under construction, she too read a fair number of meaningful phrases. It was as if, as Schreiber (1991) and Kuhn and Stahl (2003) postulated, they were naturally transferring what knowledge of syntax they had, to the print medium. This suggests further consideration of Schwanenflugel et al's (2004) hypothesis that the ability to segment text using syntactic and semantic boundaries may act as a partial mediator between simple decoding and comprehension. While Edward's reading was fairly slow, his ability to read in phrases may have allowed him to maintain the momentum to carry him through the stories with understanding.

It is also important to note that the children appeared to put words together in phrases more easily in some books or in some passages than in others. Genre did not seem to affect Bradley's fluency, perhaps because his processing system was very secure, enabling him to move with ease from one type of book to another. Some of the other children, however, seemed to read more effortlessly on familiar tales, books with engaging characters and situations, and passages with stretches of familiar language. Even with limited knowledge of English, Danica seemed to group words into phrases that she might have heard before, like "*in about five minutes*" and "*Joe took care of Honey*". This suggests that books may vary in the opportunities they afford for children to read words together in meaningful phrases by accessing their knowledge of syntax. In addition, the large number of examples of reflecting the mental states of the characters, as suggested by Hudson et al (2005), may point to the need to select books offering opportunities for children to relate to the characters. Danica's inability to read a large

number of words together in meaningful phrases and to reflect the emotion of the characters may have been that the syntax of the story was difficult for a second language learner, that she had difficulty relating to the plight of the characters, or that she was so intent on reading words correctly that she was unable to make meaning. In other words, it may in some cases be the book's challenges in syntax or content that are too much for the child. A more careful examination of the books we offer to different children would then be warranted not only for the purpose of using knowledge of syntax, but also for relating in some way to the emotions and problems in the stories.

Perhaps the most unexpected finding from the analysis of the phrases was the way in which particular words seemed to trigger or signal the utterance of consecutive words in a group. As Walter Kintsch (1998) suggested, perhaps the children were constructing meaning as they identified words, integrating their knowledge of language, texts, and the world, and allowing small chunks of meaning to settle in with the larger meaning of the story. Edward's phrase, "*Soon the wheat began to grow*" presents a number of possibilities for words that may have helped him build the momentum needed to complete that longer stretch of meaning. This suggests that we may need to think further about the kinds of words that bind longer stretches of text together for children, and help them construct meaning on the run. For example, we may need to ask why children tend to read the words in prepositional phrases together and to think more about questions that may be signaled in young reader's minds by words like prepositions.

The examination of the unique reading processes of the children complemented the findings on fluency in such a way that it became possible to see how the two aspects of the reading are intertwined. Most significant were the anomalies that existed in the

reading of all the children, clearly demonstrating that each child was at a different place along the path, with some aspects working well and others lagging. Analysis of the running records and audio-tapes pointed out that reading can sound phrased and expressive in many places but can be riddled with uncorrected errors. A reading sample can fall into the instructional or easy range yet still reveal the child's inability to problem-solve new or difficult words. The reader may demonstrate many desirable strategies such as self-correcting and searching for information, but yet fail to read in a way that captures the interest of the listener. Word recognition and decoding of unfamiliar words can be reasonably fast but the reading may lack the phrasing and expression indicative of understanding the text.

Examining a child's reading from as many perspectives as possible could prevent a misconception that all is well with fluency and processing. The data from this study suggests that a thorough examination of reading must always be partly quantitative and partly qualitative. While raw data on accuracy and rate are important, it is the rich description of the sound of the reading and the problem-solving done on the text that round out the picture of the child as a reader. This means that there will always be a degree of subjectivity in analyzing children's reading, but a well-trained teacher who knows the child's reading history will be able to use the information appropriately to further instruct the child. Clay (2002) suggests that:

> immediately following the reading and before you begin to analyse the detail of the record, write a few lines on what you just observed, your intuitive summation of the child's reading, at the end of the record. This should be an overall reaction. Comment on what the reader did well.

> Was the reading done at a good pace, or was it slow, or too fast? Are things in balance or out of balance in your judgment? Is s/he reading groups of words together in a phrased way? Attend particularly to change over previous readings (p. 61).

Clay's notion of balance in children's reading may be critical to understanding how fluency and processing complement and power each other forward as children become more proficient readers. Asking Clay's questions about children's reading increases the chance that all aspects are contributing equally, and that they continue to shape the reading over time. According to Clay, "the test of progress comes when s/he can problem-solve his/her way through the whole text independently using cues from language and from print and maintaining a high level of fluency" (1991, p. 202). Her questions prompt teachers to think about how steadily the child is approaching this goal.

The following section discusses the implications this discussion may have for teachers and administrators.

Implications for Teaching Children to be Fluent

Practical techniques for incorporating the teaching of fluency into the curriculum abound in literature. For example, Ellery (2005) provides an up-to-date, readable, comprehensive menu of classroom strategies for teaching children to read fluently. An abundance of new research and suggested strategies continues to provide a wide range of techniques from which teachers may choose. The difficulty remains in the selection of methods that best support young readers in their early attempts at reading.

The purpose of this study was not to evaluate these classroom strategies, but to view fluency in light of developing reading processes, and to provide further insight into

the way children develop fluency as they learn to read. This chapter has highlighted some areas of interest and concern in the reading of the six children, leading to some important implications for teachers. The remainder of this section is devoted to a focus on four areas that teachers may keep in mind as they make instructional decisions in regard to the teaching of fluency.

Think about Training the Ear

This study has shown that with a trained ear it is possible to discover and describe the subtleties and nuances in the oral reading of children that may be indicative of the way in which they understand the text. There are two aspects to the concept of training the ear, one being for teachers to attune their own hearing to the sound of the children's reading, the other being to train children to listen to themselves as they read.

While literature informs teachers how to teach and assess fluency, it offers little help on how first to listen to and learn from children's reading. Knowing what to listen for is fundamental if teachers are to become more effective in their decisions about instructional methods. Teachers will not know what to teach unless they have practiced listening to the oral reading of many children and putting into words what they have heard. This enables them to develop a personal working vocabulary of words to describe children's individual reading. Meeting with colleagues to practice listening to and describing audio-tapes of children's reading would be very helpful. Bomer (2006) stresses the importance of helping older children develop the ability to tune their minds' ear to the author's words, and says that this inner listening,

> overlaps with or melds with other kinds of thinking we do at the same instant. We picture the scenes in our mind's eye. We develop relationships to characters. We

> anticipate the ends of sentences and construct an anticipatory sense of the shape of the whole text. We interpret, developing and discarding hunches about the big ideas in the story. We begin to locate the story socially and examine it for the perspectives that might be missing or repressed. All of these, and many other things, happen at the same time that we create the voice of the text in our mind's ear. (p. 528)

As pointed out in my study, this attunement with the events and emotions of the text can be heard even in the oral reading of grade one children. Because reading has not yet become a silent process in grade one, it would seem that oral reading is a vehicle for teaching beginning readers to listen to themselves as they vocalize the words of the author. Hudson et al (2005) claim that allowing children to hear their own audio-taped voices "promotes independent judgment and goal setting, along with ownership of the process" (p. 711). Ellery (2005) provides specific examples of "teacher talk" that helps children monitor and evaluate the sound of their own reading. Clay (2005 Part Two) says that children must read with an expectation of the way reading should sound and prompts teachers to ask children periodically, *"Are you listening to yourself? Did it sound good?"* (p. 152). Teachers need to begin incorporating this kind of purposeful talk into instructional situations and then watch for signs that children are listening to their own reading. A child who re-reads a sentence to achieve a better sound is presenting evidence of Ellery's "independent judgment" and "ownership of the process".

Think about Phrasing

The existence of so many phrases in this study demonstrates that even weaker readers tend to string words together in groups that are often syntactically correct and

meaningful in the context of the stories. This tacit understanding of the ways in which words go together in speech and the ability to transfer that understanding to the reading of text is too evident to be ignored in our teaching. It seems that teachers need to search for ways to help children use their knowledge of language structure as a resource for their reading. According to Clay (2005, Part Two), it is a reasonable expectation for "the beginning reader to group words together whenever s/he is able and as soon as this can happen" (p. 150), thus increasing the child's chances that s/he will understand the message of the author. She provides specific teacher prompts for this purpose. While some children may do this naturally, others will require more determined teaching; particularly the children who have already developed the habit of reading in a choppy, word-by-word style.

As evidenced by this study, it is possible to listen to children's reading and determine the boundaries of phrases they have uttered, allowing teachers to think about the number of words put together, what kinds of words may signal or trigger the utterance of a string of words, and whether the phrases are for the most part meaningful and syntactically correct. An understanding of the types of phrases children tend to read naturally could be helpful to teachers in thinking about what words they can ask children to put together as they are reading orally. For example, prepositional phrases, phrases with articles and nouns, and phrases with characters' names or pronouns followed by a verb appeared most often in this study. Therefore, these types of phrases may be reasonable places to begin in teacher demonstrations of phrasing. Again Ellery's (2005) teacher talk could be applied to these types of word groupings to help children become aware of phrases and listen to and evaluate their sound. This implies that teachers must

know the texts they are using very well in order to first determine where the phrase boundaries may lie. Phrase boundaries are subjective, and are not immediately evident to teachers, so this requires practice and judgment.

Think about Balance

The anomalies noted in the reading of the children in this study lend credence to Clay's (2002) question, "Are things in balance or out of balance in your judgment?" (p. 61). Other ways to ask this question might be, *Is the reading going well on all fronts*? or *Are the fluency and processing developing nicely together*? One of the most significant findings was that while some aspects of the children's reading appeared to be developing in a healthy way, others were lagging. Teachers need to explore this concept of balance and to engage in conversations about how it looks and sounds in samples of children's reading. A perceptive teacher, for example, who notices that a child sounds fluent but has limited comprehension, may find help in examining running records more closely and considering what is going awry. Clay (2006) suggests that we may not fully recognize the potential of having children do a quick retell of the story after reading.

I believe that this notion of balance can come only in understanding the complexity of what we are asking young children to do as they read. This study showed that rate, accuracy, and prosody all contribute to fluent reading, but that without considering the child's individual reading process; these elements provided an incomplete picture. It was only in describing the fluency and processing systems together that it was possible to see areas of concern. For teachers this warrants periodic checks on whether the child is noticing and searching for ways to correct errors and searching for ways to

bring his knowledge to bear in problem-solving the messages in the text, as well as on the ease and effortlessness with which the child is able to accomplish these things.

Having delivered many workshops on running records, I can attest that it is a common practice for many teachers to use running records simply as a means to establish an instructional level at which to teach the child. In using running records for accuracy of text alone, teachers are missing the opportunity to learn much more about the child as a developing reader. It is important to remember that the students in this study all read at an instructional to easy level, but not all were reading efficiently and with ease and comfort.

Fountas and Pinnell's (2008) Benchmark Assessment System provides teachers with a comprehensive tool for teachers to obtain an overall picture of the child as a reader. This system incorporates elements of accuracy including self-correction, a fluency scoring key describing the sound of the reading, and an optional method of attaining a reading rate. Such assessments encourage teachers to consider many dimensions of fluency while bearing in mind the complexity of the reading process. Teachers need to use comprehensive assessment tools such as this in order to shape and guide further instruction. In addition, they need to constantly question whether their instruction is addressing all aspects of reading development, or whether it is weighing heavily on a particular aspect of the reading process, resulting in throwing some children's reading off balance.

An additional implication here is that grade two teachers cannot assume that everything is in place for children as they begin their second year of formal reading instruction. In spite of their teacher's awareness of fluency and the reading process, almost all children in this limited study demonstrated aspects of their fluency and

processing systems that were still under construction and that were in some cases, fragile. It would seem critical to assess reading early in the grade two year, and determine a course of teaching that will strengthen and maintain a balance in all the aspects of the children's reading. Teachers should think hard about presenting increasingly difficult books to children before all aspects of the reading process are functioning together well.

Think about Book Selection

An unexpected implication arising from this study was the critical nature of book selection for particular children. From my observations, it appeared that the children's success might have hinged as much upon the language structures in the text, the layout of the pages, the content, and the likelihood that a six year old could relate to the characters' problems or emotions, as it did upon the level of the books. This may have been true particularly for Danica, a second language learner who read fairly quickly and accurately, but did not show that she understood or related to the story.

In W. Kintsch's (1987) theory, the passage itself plays a significant role as the reader builds a text base, filtering it through his/her own knowledge base to build a mental image that balances both text and personal knowledge. It would seem that the reader would have a better chance of constructing meaning through this interaction with the text if s/he were in some way prepared to activate this personal knowledge, and if the text were written in a way that enables the reader to do so. Teachers need to consider whether or not particular books lend themselves to prosodic reading, both in terms of layout and language structure. Furthermore they need to ask themselves if children have the grasp of literary structures and oral language to bring elements of prosody to the reading. This necessitates careful groundwork on the part of the teacher in previewing

and introducing new books to children. Clay (2006, Part Two) speaks of helping the child orient him/herself to the text, allowing the child to align his/her own ideas and knowledge with the story. This might involve perusing the selection to predict the story line, drawing attention to new or unusual language structures that might be unfamiliar to the child's ear, and allowing the child opportunities to practice saying these groups of words together before reading.

Orienting the child to the text may be especially important in working with children whose first language is not English. In this study, Danica was able to reach high levels of accuracy while showing little evidence of understanding the stories. Students who are less familiar with the nuances and cadences of the English language may need extra practice in hearing and repeating potentially difficult phrases or language structures. It would seem that demonstrating how the voice drops and halts briefly at a period would help the child access the text structures more easily. In addition, it could be helpful to teach children to question a more expert speaker of the language when clarification of words or passages is needed. After the reading, a quick retell by the child might provide a clearer picture of how well s/he has grasped the meaning of the story.

Text selection is pivotal, and content, layout, emotion, events, and the way in which language is presented must all be considered in the light of children's present competencies. Fred could not relate to the characters, the emotion, or the content of a story about a dove helping an ant out of the water. He started confidently and apparently with expectations of doing well, but quickly slid into word-by-word, hesitant reading and ultimately became frustrated. If teachers want children to enjoy successful interactions with texts, they need to consider their interests, control of language, and knowledge base,

and help to align these somehow with the story before reading. It appears from some of the reading in this study that the child must have some emotional stake in the reading in order to maintain the commitment and momentum to see it through, and that the teacher must select or help the child choose books that make that possible.

In this study, book levels were not mentioned because the focus was on the fluency and on the children's processing as they read stories that the teacher had deemed were appropriate for their current reading competencies. However, some of the children showed that it is possible to achieve a high percentage of accuracy even though they struggled in many places. It is quite possible that in some cases the texts were too difficult for the child to consolidate, or bring together efficient processing with rate and elements of prosody. In addition, a text that is too difficult for a child may necessitate so much problem-solving that the child's cognitive capacity is overloaded, making it impossible to maintain the meaning of the story and to notice when something they have read does not make sense. My impression was that if some of these children were practicing their reading on books that were slightly less challenging, not only would their running records have shown more effective reading work, but the children themselves would have felt more successful, engaged, and motivated. Fred entered the testing situation happily and confidently, but his comfort and confidence faded noticeably as he began to struggle with the first text, partly evidenced by his slumping shoulders and slight pulling away from the table.

Teachers should be more concerned with the quality of the work being done on a well-chosen text than with the level on the back cover. They must guard against creating a situation in which children and parents believe that the main goal of reading is to advance

higher and higher in book levels and in which the child feels pressured to read increasingly difficult text. Even good readers such as Bradley may lose fluency and understanding when text becomes too difficult. It is helpful for them to bear in mind that levels are often assigned by publishers who have no knowledge of particular children, and that the number or letter should act strictly as a guide. In discussing the merits of using leveled texts in the classroom, Antymis and Paterson (2004) state that,

> a teacher's informed and reflective use of leveled text can provide the support children need in learning to read. This infers that early years teachers of reading need to be informed and judicious in their selection and use of text in their classrooms (p. 19).

One last implication regarding text is the importance of building opportunities into the daily routine in which children can practice re-reading familiar books in order to gain further fluency and understanding. Edwards's reading was phrased and expressive but slow, and he was "almost there" in terms of his processing. I thought that if he could read the stories one or two more times, he would be more fluent and feel more successful. Clay (1991) states that teachers prefer children to read new material and fear the memorization that may occur on re-reading, but that,

> when children are allowed to re-read familiar material they are being allowed to learn to be readers, to read in ways which draw on all their language resources and knowledge of the world, to put this very complex recall and sequencing behaviour into a fluent rendering of the text (p. 184).

This is not to suggest that children be presented with the same passage of reading over and over again until they have achieved a desired speed, as some proponents of Repeated

Reading (Samuels 1979) would advocate. Rasinski (2006) recommends that given the support in research for Repeated Reading, one thing teachers could do is have children practice and then perform passages of authentic texts, lending naturalness, authenticity and purpose to repeated reading. In a similar vein, Carrick (2006) promotes the incorporation of *Reader's Theatre,* the practicing and performing of scripted passages in a co-operative social setting, into classroom literacy activities as a means of "responding to, interacting with, and interpreting a text" (p. 223).

Finally, teachers need to develop a working vocabulary to describe their observations in assessing children's reading. Listening to many children and jotting down quick comments about the sound of the reading after the running record could help the teacher expand his/her repertoire of descriptive words and phrases. This practice could also help the teacher to discover anomalies which are easily overlooked when the reading is fairly accurate. For example, words such as *slow, hesitant, jerky,* and *halting* may send a warning signal to the teacher even if the reading appears to be fairly accurate. On the other hand, notations like *quick and confident, well phrased with attention to punctuation,* and *smooth and expressive* may provide further evidence that an accurate running record is truly reflective of efficient processing.

Literature provides a wealth of information on fluency instruction, but in making instructional decisions, teachers need to be selective and thoughtful. The following suggestions arise from the data in this study.

Preparing for Fluency Teaching

- Select books judiciously, bearing in mind the challenges and opportunities of the texts, and individual children's interest, language, knowledge base, and current reading capabilities.
- Orchestrate many opportunities in different authentic, purposeful situations for children to re-read books they enjoy. A steady diet of new books without opportunities to re-read familiar material could prevent the child from consolidating processing and fluency.
- Train your ear to hear the nuances and melody of oral reading that provide clues about comprehension, and train the children to evaluate the sound of their own reading.
- Acknowledge the complexity of the task you are asking young children to do, and examine running records carefully to ensure that children are becoming increasingly efficient in their reading work and not perpetuating unhelpful habits such as waiting to be told words.
- Arrange for regular opportunities during the school day to demonstrate prosodic reading to children by reading aloud and drawing their attention to how the voice can be used to reflect the meaning of the story.
- Show children how to group words together in phrases to help them hear how the author meant the story to sound. Allow them opportunities to practice reading in phrases or thought units, and watch for increasing ability to group words together meaningfully.

- Watch for signs that children are relating in some way to the emotion or the problems in the story and that their voices reflect some understanding of the characters' situations.
- Meet with colleagues both formally and informally to discuss children's reading and share running records to develop a common language for discussing children's reading progress.

Implications for Administrators

The actions of Administrators can go a long way toward ensuring that teachers are promoting fluency in a thoughtful, informed, and meaningful way in early years classrooms. Rasinski (2006) states that administrators can make fluency a school priority by encouraging professional development, reading, observation, and discussion, and by insisting that regular assessment tracks children's growth in fluency.

This study has set forth some guidelines for teachers in selecting best instructional practices for the teaching of fluency. Administrators can support teachers' efforts by participating in discussions on such topics as book selection, including the challenges and opportunities offered by different kinds of text and how these choices affect fluency. They can expect teachers to take running records regularly, not just as an indicator of accuracy, but as a vehicle for deeper understanding of children's developing reading processes. They can watch for evidence that children are receiving many varied opportunities to read familiar books in authentic situations. They can question teachers about their beliefs on reading instruction and support their efforts to learn more.

Future Directions

An abundance of literature, further supported by this study, has established reasonably well that fluency is a multi-faceted concept characterized by rate, accuracy, and prosody, and that it contributes in some way to the efficacy of reading development. This study took a somewhat different direction in attempting to describe fluency along with children's individual developing reading processes. It has demonstrated that each child takes a distinct route in the development of fluent reading, and that this uniqueness cannot be described simply through measures of rate, accuracy or even prosody alone. It is critical to observe whether children are using what they know about language, about the world, about stories, and about print, and whether they are noticing and correcting errors and searching for ways to problem-solve new words. The small size of the study limits generalizability, but opens up possibilities for further research into how fluency is linked to the building of an effective reading processing system. For example, how are elements of fluency linked to the ability to problem-solve new and difficult words?

Evidence from this study suggests that we have much more to learn about prosodic elements of fluency such as phrasing, and to understand how these elements might be linked to comprehension. Bomer (2006) states that,

> the larger concept of fluency concerns the extent to which a reader is thinking in units of meaning beyond the word—whether the reader is processing whole thoughts in the way people usually do when they're thinking, rather than a single word at a time (p. 530).

This may be interpreted to mean that fluent reading involves much more than the rapid, accurate decoding of words. It involves a mental search for ways to align what we already

know with the meaning intended by the author. Teachers need to become better at gauging the signs that children can understand and interpret the print, and the ability to read in phrases (prosody) is one indicator. This aspect of fluency is relatively uncharted.

The link between children's control of oral language and their fluency is another area worthy of consideration. Given the number of children in the school system with limited control of the English language, it is imperative that we search for ways to understand how they can be helped to unlock the sometimes complicated language structures in the texts we use.

More research is needed into the role text itself plays in either enhancing or inhibiting reading fluency, to enable teachers to select books judiciously for particular individuals or groups of children. Teachers are increasingly being encouraged to introduce informative texts to young children in the first years of school. Do particular characteristics or genres of text lend themselves more readily to fluent production? What is the optimum mix of genres in order to ensure that children are able to practice and maintain fluency? In this study, a general overall description of each child's fluency and processing was written from an analysis of the running records and audio-tapes on the three books. A future study describing each child's processing and fluency on each book might provide further insight into the ways in which genre, layout, language, and content can potentially change the sound and efficiency of the child's reading. For example, Bradley's reading rate was markedly lower on one of the informative texts than on the other two books. He also demonstrated that it is possible to use a completely different kind of reading voice on fiction and non-fiction.

In spite of what we already know about fluency, Allington (2006) warns that we still have much learning to do about:

> the role of reading fluency in reading acquisition, how to best foster reading fluency, and how to ensure that fostering reading fluency also enhances reading comprehension, motivation, and proficiency. We also need to better understand how our instructional interactions might undermine self-regulation and agency and create readers who read dysfluently, with little understanding and little motivation to read voluntarily. We know a little about fluency, but a little knowledge can be a dangerous thing (p. 102-103).

Researchers and practitioners would do well to keep this in mind as they design future research and instruction. If understanding the text is the desired result and the reward of reading, we must ensure that we have genuine means of assessing children's understanding of text. Educators need to consider not only the complexity of children's fluency and reading processes, but also children's capacity to bring their own knowledge and worldly experience to the reading of text. That complexity can be explained by Clay (1998) who says that young readers are "learning to be constructive, problem-solving doers and thinkers, each working towards more complex ways of responding. They initiate, construct, and actively consolidate their learning as they interact daily with their own special worlds" (p. 3). We must take care that the child is increasingly learning to use knowledge of language, the world, stories, and print, to help comprehend text. Careful, insightful observation of children's reading informs us if our selected

instructional methods have been effective. We need to work with a global view of fluency in which it is part of a larger process that is developing differently for each child.

This study has revealed that fluency, in all its intricacy, begins to appear early and is unique to each individual. Elements of rate, accuracy and prosody are integrated with the thinking and constructive problem-solving children are doing as they respond to print. Fluency and processing of text are complex, unique to individuals, multifaceted, and inter-related. This study has pointed out that to reduce fluency or processing of text to quantitative measures alone is to neglect nuances and clues to the child's engagement, enjoyment, and understanding of text.

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APPENDIX A

APPROVAL CERTIFICATE

22 May 2007

TO: **Jennifer Antymis** (Advisor K. Smith)
Principal Investigator

FROM: **Stan Straw, Chair**
Education/Nursing Research Ethics Board (ENREB)

Re: **Protocol #E2007:039**
"Exploring Fluency as Part of Early Reading Processing Systems: A Study of the Oral Reading of Grade One Students"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note:

- **if you have funds pending human ethics approval, the auditor requires that you submit a copy of this Approval Certificate to Kathryn Bartmanovich, Research Grants & Contract Services (fax 261-0325), including the Sponsor name, before your account can be opened.**

- **if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.**

The Research Ethics Board requests a final report for your study (available at: http://umanitoba.ca/research/ors/ethics/ors_ethics_human_REB_forms_guidelines.html) **in order to be in compliance with Tri-Council Guidelines.**

APPENDIX B

Letters of Consent

Participating Classroom Teacher

Research Project Title: Exploring Fluency as Part of Early Reading Processing: A Study of the Oral Reading of Grade One Students

Researcher: Jennifer Antymis

Sponsor: University of Manitoba
Faculty of Graduate Studies
April, 2007

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Dear_____,

As part of the requirements for a Masters Degree in Education, under the supervision of Dr. Karen Smith at the University of Manitoba, I am conducting a study of fluency in beginning reading and how it fits in with children's early reading processes. The main focus of the study is on the oral reading of the children but I will also conduct a brief audio-taped interview with you regarding book selection and reading opportunities in the classroom. Your participation in this study will be completely voluntary. It will involve

- sending home letters of consent to the parents/guardians and checking, sealing, and signing returned envelopes
- providing 5 books for each child that he/she has read successfully
- allowing the researcher to audiotape and take a Running Record of each child's reading of 3 of the books you have selected for him/her.
- Participating in a brief audio-taped interview regarding book selection and reading opportunities in the classroom

The observation of each child's reading is expected to take approximately 10 minutes from each child's classroom time. The study will take very little of your own classroom time.

The interview with you will take approximately 20 minutes and will consist of 8 questions to be answered orally. Your responses will be audio-taped and later transcribed and interpreted. It is your right to opt out of the interview process at any time.

You are free to withdraw from this study at any time, and your decision will be honored. If you decide to withdraw, I will not use any data collected from the reading of students in your classroom. This study will not be conducted unless I have obtained written consent from the school division, principal, teacher, parents/guardians, and students involved.

Every attempt will be made to keep the names of students, the teacher, the parents/guardians, the school, and the school division anonymous. At no time will any of these names be used in the study. The only exception to this will be the signed consent forms that will be returned to you by the children. You will be asked to seal the envelope and sign the form on the outside to verify that parent/guardian permission has been granted. I will not divulge any information or comment verbally or in writing on your teaching, your classroom, or your students to other employees or to parents in the school division.

The data obtained from the audio-taped reading and the Running Records will be seen and heard only by me and by one other independent researcher. All computer files holding information on this study will be protected by password. Data pertaining to the study will be kept for three years and then destroyed.

I believe that this study will provide insight into fluency and how it fits in with the reading processes of grade one students. I appreciate your assistance in allowing this study to be conducted with children in your classroom.

Sincerely,

Jennifer Antymis

Your signature on this form indicates that you have understood to your satisfaction the information regarding participants in the research project and agree to

participate. In no way does this waive your legal rights or release the researcher, sponsor, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/ or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Education/Nursing Research Ethics Board (ENREB). If you have any concerns or complaints about this project you may contact Human Ethics Secretariat or Dr, Karen Smith. A copy of this consent form has been given to you to keep for your records and reference.

_____

(Participant's signature) (Date)

_____

(Researcher's signature) (Date)

Please indicate if you wish a summary of the research sent to you upon completion of the research project and provide an address (home or e-mail) where the summary can be sent.

_____ Yes, I wish to receive a research project summary.

Please forward the summary to _____.

Letter of Consent

Parent/Guardian Permission for Child to Participate

To the Parents/Guardians of _____

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

My name is Jennifer Antymis. I am an elementary school teacher years and a Graduate Student in Education at the University of Manitoba under the supervision of Dr. Karen Smith. I am interested in studying fluency in the oral reading of grade one children.

This letter has been sent home with all children in your child's grade one class. I am asking permission to audiotape your child's reading during his/her day at school for approximately 10 minutes as he/she reads 3 short books that the classroom teacher has selected for him/her. These will be books that your child has successfully read before in the classroom. A group of 6-8 children will be chosen from all the positive responses that are returned to the classroom teacher.

Although some educators think that children do not become fluent readers until they are older, I believe that even beginning readers show some signs of fluency (e.g. using expression). These are signs that the child understands the book he or she is reading, and are important for teachers to notice. This study will consider how these signs of fluency fit in with other aspects of children's early reading.

If you agree to let your child participate in the study, I will first ask your child for permission to tape the reading. During the reading I will take a *Running Record,* a common classroom practice in which the teacher codes the words read correctly and incorrectly. If the child agrees to be audio-taped, the taping will begin. This audio-taping should take no more than 10 minutes from classroom time, and will provide extra practice for your child to read out loud. Due to possible interference of classroom noise, the taping will be done in a quieter area close to the classroom. If at any time your child does not wish to continue with the reading, he/she may return to the classroom. If at any time you decide that your child should not be in the study, you may withdraw your child's participation.

Every attempt will be made to keep the name of your child, the teacher, the school, and the school division anonymous. At no time will any of these names be used in the study. The only exception to this will be the signed consent forms that will be returned to me in sealed envelopes verified by the teacher. The data from the audio-taped reading and the Running Records will be seen and heard only by me and one independent researcher who will verify the results. I will not share information about your child's reading with anyone else. All computer files holding information on this study will be protected by password and will be accessible only by me. Data pertaining to the study will be kept for three years and then destroyed. If you have any questions about the study, please feel free to contact me.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participants in the research project and agree to participate. In no way does this waive your legal rights or release the researcher, sponsor, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/ or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Education/Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact Human Ethics Secretariat or Dr. Karen Smith. A copy of this consent form has been given to you to keep for your reference.

_____

(Signature of Parent/Guardian) (Date)

_____

(Researcher's signature) (Date)

Please indicate if you wish a summary of the research sent to you upon completion of the research project and provide an address (home or e-mail) where the summary can be sent.

_____ Yes, I wish to receive a research project summary.

Please forward the summary to _____.

Participating School

To: Principal of Participating School,

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Dear (Insert name of principal of participating school)

As a Masters of Education student at the University of Manitoba, under the supervision of Dr. Karen Smith, I am conducting a research study entitled *Exploring Fluency as Part of Early Reading Processing: A Study of the Oral Reading of Grade One Students.* The purpose of the study is to seek clearer understanding of the aspects of fluency found in the oral reading of grade one students, and to consider how these aspects of fluency may play in with the students' reading processes. The focus of the study is on the oral reading of grade one children but in addition I will conduct a short audio-taped interview with the teacher regarding book choices and reading opportunities in the classroom. This study will take very little of the teacher's classroom time and will involve a minimum of disruption to the classroom routine.

In order to conduct this research, I am seeking your assistance and permission in allowing me to audiotape and take a Running Record of the oral reading of 6-8 selected students in one grade one classroom. A letter of permission will go home with all students in the class explaining the study to parents/guardians. The selections will be made by putting all returned positive responses into a hat and drawing 6-8.

There are unlikely to be any risks to the teacher and students outside of those that would normally occur during the course of the school day. Participation in the study is strictly voluntary. Participants would be free to withdraw at any time. Permission has been granted from the Superintendent of this School Division. Letters of consent will be obtained from the classroom teacher, the parents/guardians of the participants, and each participating student.

Every attempt will be made to keep the names of students, the teacher, the School, and the School Division anonymous. At no time will the names of any of the participants appear or be used in any written documents. The only exception to this will be the signed consent forms that will be submitted to me in sealed envelopes by the teacher. On the outside of the sealed envelopes will be teacher's signature, indicating that permission has been granted from the parents/guardians.

The only other people to see the Running Records and listen to the audiotapes will be one independent researcher who will verify the results. All computer files pertaining to

the study will be password coded, accessible only to me. All data will be kept for three years and then destroyed.

I will not divulge any information or comment verbally or in writing on the teaching, the classroom, or the students to other employees or to parents in the school division.

I believe that fluency is not only an end goal of reading instruction but a crucial, teachable aspect of reading instruction almost from the beginning. This study will provide insight into fluency and how it fits in with the reading processes of grade one students, an essential understanding for teachers of early readers. I hope that, with your assistance, I will be able to conduct this study and provide further understanding into this key concept of literacy learning.

Sincerely,

Jennifer Antymis

Your signature on this form indicates that you have understood to your satisfaction the information regarding participants in the research project and agree to participate. In no way does this waive your legal rights or release the researcher, sponsor, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/ or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Education/Nursing Research Ethics Board (ENREB). If you have any concerns or complaints about this project you may contact Human Ethics Secretariat or Dr. Karen Smith. A copy of this consent form has been given to you to keep for your reference.

_____

(Signature of School Principal) (Date)

_____

(Researcher's signature) (Date)

Please indicate if you wish a summary of the research sent to you upon completion of the research project and provide an address (home or e-mail) where the summary can be sent.

_____ Yes, I wish to receive a research project summary.

Please forward the summary to _____.

Participating School Division

To:

The Superintendent's Department

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

As a Masters of Education student at the University of Manitoba, under the supervision of Dr. Karen Smith, I am conducting a research study entitled *Exploring Fluency as Part of Early Reading Processing: A Study of the Oral Reading of Grade One Students.* The purpose of the study is to seek clearer understanding of the aspects of fluency found in the oral reading of 6-8 grade one students in one classroom, and to consider how these aspects of fluency may play in with the students' reading processes. The focus of the study is mainly on the oral reading of the children but I will also be conducting a brief audio-taped interview with the teacher regarding selection of books and reading opportunities in the classroom. This study will require very little of the teacher's classroom time and will involve a minimum of disruption to the classroom routine.

In order to conduct this research, I am seeking your assistance and permission in allowing me to audio-tape and take Running Records of the oral reading of 6-8 selected students in one grade one classroom. A letter explaining the study will be sent home with all children in the class, and names will be drawn from positive responses.

There are unlikely to be any risks to the teacher and students outside of those that would normally occur during the course of the school day. Participation in the study is strictly voluntary. Participants would be free to withdraw at any time. Written permission will be sought from all key participants, including the School Division, school, classroom teacher, and parents/ guardians. Students will be asked for verbal assent.

Every attempt will be made to keep the names of students, the teacher, the school, and the School Division anonymous. At no time will the names of any of the participants appear or be used in any written documents. The only exception to this will be the signed consent forms that will be submitted to me in sealed envelopes. On the outside of the sealed envelopes will be teacher's signature, indicating that permission has been granted from the parents/guardians.

The only other people seeing the Running Records and listening to the audiotapes will be one other independent researcher. All computer files pertaining to the study will be password coded, accessible only to me. All data will be kept for three years and then destroyed.

I will not divulge any information or comment verbally or in writing on the teaching, the classroom, or the students to other employees or to parents in the school division.

I believe that fluency is not only an end goal of reading instruction but a crucial, teachable aspect of reading instruction almost from the beginning. This study will provide insight into fluency and how it fits in with the reading processes of grade one students, an essential understanding for teachers of early readers. I hope that, with your assistance, I will be able to conduct this study and provide further understanding into this key concept of literacy learning.

Sincerely,

Jennifer Antymis

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omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

This research has been approved by the Education/Nursing Research Ethics Board (ENREB). If you have any concerns or complaints about this project you may contact Human Ethics Secretariat or Dr. Karen Smith. A copy of this consent form has been given to you to keep for your reference.

(Signature of Superintendent) (Date)

(Researcher's signature) (Date)

Please indicate if you wish a summary of the research sent to you upon completion of the research project and provide an address where the summary can be sent.

_____ Yes, I wish to receive a research project summary.

Please forward the summary to _____.