PATTERNS OF RELATIVE READING PERFORMANCE FROM KINDERGARTEN TO GRADE SIX

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By

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ABSTRACT

This study investigated the relative reading performance, from kindergarten through to grade six, of 187 students from a rural school district in Newfoundland and Labrador, Canada. The aim of the investigation was to determine when reading performance patterns are established, to determine critical points for reading achievement over the course of primary and elementary school, and to determine whether a systematic relationship exists between gender and reading performance.

Reading performance scores were obtained for the school years from kindergarten through to grade six for three cohorts of students who entered kindergarten in 1985, 1986, and 1987 respectively. These scores were analyzed statistically through cross tabulation analysis enabling an examination of each student's relative reading performance placement throughout each grade level from kindergarten to grade six inclusive.

Researchers highlight the development of early literacy concepts, such home influences as storybook reading, and the development of positive attitudes toward education as factors that affect reading development. Research supports the claim that early literacy development significantly affects reading performance and is predictive of later reading achievement.

Conclusions indicate that patterns of reading performance are clearly established by grade one and are consistent up through and including grade six. The identification of critical points for reading development along the primary and elementary school continuum signal the need for further attention to reading performance at the beginning of school and at grades

three and six. The existence of performance distribution differences between boys and girls in the primary grades but not in elementary school also warrants further attention in efforts to improve literacy levels for all students.

Suggestions for consideration evolving from this study include assessment of emergent literacy development in the preschool years, monitoring of reading achievement throughout all primary and elementary grades with focused attention on the critical points for reading development, responsiveness to the developmental differences between boys and girls in the primary grades, and refraining from holding prior expectations for student reading performance.

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CHAPTER I

THE PROBLEM

A considerable amount of research has been conducted in the areas of literacy development and reading achievement. Given the low literacy levels reported for Newfoundland and Labrador, it is time to take stock of what is already known about literacy development and to put available information on student performance to good use. This study will examine existing achievement records to determine patterns of students' reading performance over a period of seven years and at critical points from kindergarten to grade six.

It is known that there is a sustaining reality to test scores. Reading performance, even as early as the primary grades, is one of the best predictors of later reading achievement (Kraus, 1973). In his longitudinal study of children from school entry into the adult years, Kraus found that the best readers in grades six and nine were also the best readers in second grade and scored consistently above the norm. The poorest readers also demonstrated their reading difficulties as early as second grade and most continued to experience reading problems. McCormick and Mason (1986), in their study of intervention procedures with preschoolers, found evidence that students who begin school at the bottom of their class with respect to literacy development, usually continue to lag behind. A significant factor in students' reading growth is what they know at the beginning of first grade. Anderson (1993) suggests, "The first grader who cannot independently read stories from the first grade reader by the end of the year is already at grave risk for school failure" (p. 17). He goes on to say that educational indicators such as test scores remain fairly stable over time.

If students generally do maintain their relative performance in the area of literacy development and reading achievement (Bus, van IJzendoorn, and Pellegrini, 1995), it is important to establish the degree to which this is the case in Newfoundland and Labrador where the illiteracy rate is among the highest in Canada (Statistics Canada, 1996) and where student performance is among the lowest of Canadian students (Government of Newfoundland and Labrador, 1992, 1994, 1996). It is also important to examine reading development through a longitudinal approach to determine if there are critical points along the reading development continuum which require attention. In addition to establishing the importance of students' early success with reading, researchers have claimed that there are critical points along the reading development path which require attention for students at risk of school failure. The third grade, for instance, has been viewed as a critical point where intervention should begin. Beyond this point, such efforts are often too late and students are usually lost (Kraus, 1973; Sklarz, 1989; Reitzammer, 1990). As the third grade appears to be a point at which reading patterns are fairly fixed, Kraus (1973), advises reading problems in grades one and two be viewed with anxiety and concern for students who continue to present difficulties at the end of grade three. Kraus indicated that third grade reading scores could have been used as predictors of subsequent success or failure for the remainder of the students' school years and beyond. It seems all subsequent learning in school is not only affected by, but in large part determined by, what the student has learned by the age of nine years.

No doubt there are many important factors influencing successful performance in reading. Unfortunately, it seems the window of opportunity to help students at risk of failure is slim, relatively speaking. I am not aware of any examination of the patterns of relative reading performance from kindergarten to grade six inclusive. The information learned from my research may be an interesting development in our understanding of patterns of student progress over the years of their primary and elementary schooling.

Toward that end, I will examine existing data to determine if reading performance is more or less established at school entry. If so, it is imperative to consider interventions to offset the impact of potential reading problems and failure. On the other hand, if reading performance changes over time, an examination of those changes may provide insight into the critical points at which intervention may enhance performance as well as prevent reading performance deterioration.

Significance Of The Study

This examination of student reading performance over time will provide information about critical points at which reading difficulties arise and can most effectively be addressed. As we have no reason to think that the patterns of student reading performance have changed from those documented on existing files over the last decade or so, we can expect that the patterns established in this study will recur. Therefore, the information learned through this research will provide a starting point for planning interventions to prevent, or at the very least remediate, expected reading difficulties and possible school failure. Positive changes noted at critical points may also signal intervention points for the enhancement of student

performance. This insight is a necessary step in our efforts to raise literacy levels in our province and to improve our students' reading performance relative to students at the same grade levels in the rest of Canada.

Questions Under Investigation

My involvement with preschool, primary, and elementary school children, together with an interest in reading difficulties and learning disabilities, prompted the following questions which will guide and motivate the present study:

1. Is the pattern of reading performance fixed by kindergarten?; by grade one?; by grade three?; and confirmed in grade six?
2. If the pattern of reading performance is not fixed by kindergarten, how does this pattern change over time?

The investigation will involve attempting to answer the following four, more specific, questions that evolve from the main questions listed above:

3. For students who are performing below average at kindergarten (as determined by preschool screening), does the reading performance of these students improve, deteriorate, or remain the same over the course of their primary/elementary schooling?
4. For students who are performing at an average level at kindergarten, does the reading performance of these students improve, deteriorate, or remain the same over the course of their primary/elementary schooling?

5. For students who are performing above average at kindergarten, does the reading performance of these students improve, deteriorate, or remain the same over the course of their primary/elementary schooling?
6. Does the distribution of boys and girls in the below average, average, and above average reading groups from kindergarten to grade six differ?

Definition Of Terms

The following section provides definitions of the terms relevant to this study.

Average Performance

Average performance refers to those students' scores on the various tests studied that fall at or near the average score for that particular assessment. The range of scores representing average performance would be those that fall within the range of between plus or minus one standard deviation from the mean (and including those scores at one standard deviation above the mean and those at one standard deviation below the mean). For the School Readiness Survey, this would be scores that fall at or between 72 and 92. For the Gates-MacGinitie Reading Tests, this would be scores that fall at or between 40 and 60.

Above Average Performance

Above average performance refers to those students' scores that are above the average for that particular assessment. The range of scores that would be considered above average would be those scores that fall in the range of greater than one standard deviation above the mean. For the School Readiness Survey, this would be scores that are greater than 92. For the Gates-MacGinitie Reading Tests, this would be scores that are greater than 60.

Below Average Performance

Below average performance refers to those students' scores that are below the average for that particular assessment. The range of scores that would be considered below average would be those scores that fall in the range of greater than one standard deviation below the mean. For the School Readiness Survey, this would be scores that are below 72. For the Gates-MacGinitie Reading Tests, this would be scores that are below 40.

Critical Points

Critical points refer to those points at the beginning and ending of primary and elementary school (ie. kindergarten, grade three, and grade six). These points along the education continuum warrant attention because of notable trends or changes in student performance.

Relative Performance

Relative performance refers to the position of a score in relation to all other scores in a particular set. The relative performance of a student refers to where that student's performance falls in relation to how other students in that same group performed and in relation to the performance of the norm group for that test.

Students At Risk

Students at risk refers to those students whose performance, on a preschool or a standardized reading assessment, is below average thus placing students at risk of subsequent poor reading performance and possible school failure.

Contravening Factors

This study will involve an analysis of the preschool screening results and subsequent reading performance scores of 187 students in one rural school district. While the particular patterns of results obtained may not be representative of students in other rural or urban areas, the general trend may indeed be worthy of further study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Many factors influence students' patterns of relative reading performance from kindergarten through grade twelve. Kindergarten signals for most children the start of formal schooling and hence, a review of the research on emergent literacy development is an appropriate area to begin. I shall provide an overview of the recurrent factors emerging from the literature and proceed to provide a thorough picture of what constitutes a good reader.

Early literacy skill development is one factor that significantly affects reading performance. The development of these early literacy concepts is crucial to reading achievement in later grades (Phillips, Norris, and Mason, 1996). Children who are most successful with reading and writing, even at the end of first grade, begin school with highly developed early literacy skills (Purcell-Gates and Dahl, 1991). Reading performance in the early grades is also a strong predictor of later reading achievement (Kraus, 1973) and early word recognition skills also affect the course of reading achievement for many children. The development of decoding skills often marks the beginning of a cycle that exists for many emergent readers as limitations in this area determine the amount of practice a child receives and the skill the child subsequently acquires (Durkin, 1966). Home factors, such as parent-child interactions, joint-storybook reading, and family activities involving language development have been cited as some of the most significant factors contributing to a child's early literacy development (Clark, 1976; Mason and Allen, 1986; Mason, Kerr, Sinha, and McCormick, 1990; and DeBaryshe, 1993) and therefore must also be considered.

In the following sections, I shall expand upon these factors that emerge from the research in an attempt to portray what constitutes a potential good reader at the beginning of formal schooling.

Early Literacy Concepts

Much research in the area of literacy prior to the middle of the twentieth century operated under the belief that literacy development did not begin until a child received formal instruction at school. Researchers and educators believed that literacy and reading skill development came about through a maturational process, when a child was ready to receive and succeed with formal instruction in reading and writing. This way of conceptualizing children's reading development resulted in the adoption of the term "reading readiness" which denoted that a child became "ready" to read at a certain point, a point prior to which the child was not maturationally ready. With further research into children's developmental processes came an awareness of the developmental nature of literacy acquisition as well as the important contribution of environmental factors. This new perspective for understanding children's writing and reading development during the early years prompted the need for a term that would capture this concept of children in the process of becoming literate as opposed to the earlier concept of readiness at a certain fixed point. Teale and Sulzby, (1986), chose the term "emergent literacy" to represent this new perspective. Although these researchers credit Marie Clay with initially developing this notion, they were the first to use this term to summarize the new way of understanding and researching early childhood reading and writing. The term emergent literacy, then, is representative and inclusive in the context of reading research as

it represents all literacy and language behaviors, activities, and skills that children engage in from birth until they become conventional readers and writers. The term also suggests the forward progression that children's literacy acquisition takes as they proceed through literacy development.

Early literacy skill development includes the acquisition of concepts such as knowledge of the alphabet, awareness of speech sounds, knowledge of story structure, and various print concepts. It also includes varied experiences with language such as discussions of events, receiving answers to questions asked, and listening to stories told and read. This early experience with language and print is a prerequisite to successfully grasping the literacy concepts involved in learning to read. Phillips, Norris, and Mason (1996), in their study of the longitudinal effects of early literacy concepts on reading achievement, found that increased knowledge of early literacy concepts led to increased reading achievement in later elementary grades. Their study involved an intervention (the use of a series of beginning reading booklets targeted to meet the needs of at-risk children) which fostered early literacy development in the treatment groups. This intervention supplemented the regular school language program. The children for whom early literacy development was fostered completed kindergarten with an increased literacy knowledge and were able to use this increased skill development to gain more from their educational experiences in later grades. These children experienced reading achievement gains not found in the control group. These gains were clearly attributed to the well-developed literacy skills these children acquired prior to schooling.

Purcell-Gates and Dahl (1991), in their examination of low socio-economic status children and their ways of interpreting literacy instruction in the early primary grades, found that the children who experienced the most success in reading and writing were those who began school with literacy skills that were highly developed. The results of this examination enabled the researchers to conclude that the factor affecting the children's success was early experience with written language and not socio-economic status as is often thought to be the case.

Other researchers in the area of emergent literacy have confirmed the importance of early skill development to later reading success. In her Home-School Study of Language and Literacy Development, Snow (1991) engaged in a longitudinal study designed to identify possible success factors for children from low-income families who developed appropriate literacy skills in elementary school. She found that in addition to phonemic awareness skills which support decoding, skilled reading also includes more general oral language competencies. Children become competent through the development of a variety of language skills that result from early interactive experiences. During these experiences, children learn to use and understand decontextualized language and conversational skills as well as print and emergent literacy skills. This home-school study involved data collection on children's exposure to and behavior with language experiences both at home and in school. A follow-up study (Snow, Tabors, Nicholson, and Kurland, 1995), involved performance assessments on language and reading tasks for these children throughout elementary school. This study enabled the researchers to test the hypothesis that school literacy outcomes in later grades are

related to preschool literacy skill development prior to entering school. In the follow-up assessment phase of the project, the children were given a battery of language and literacy tests each year through fourth grade. The data supported the claim that young children's oral language skills give valuable information about their academic futures. While knowledge of letters, words, and other print-related skills is an important feature in literacy development, in this study, Snow et al. found that these early print concepts are not sufficient for successful reading performance. What is also needed, they say, is a wider array of skills relating to such factors as metalinguistic awareness, decontextualized oral language skills, and an awareness of the culture of literacy. These oral language skills and print concepts are related to each other and to literacy achievement. From the results of this study, Snow et.al. believe that while print-related skills and the more traditionally assessed skills of letter, shape, color, and number knowledge are important, oral language skill development may give more information about children's academic futures.

In her longitudinal study of the achievement of preschool readers, Durkin (1966) found that higher reading achievement was attained by the group which began getting help at home prior to school entry at age five. Those who began getting help at age three attained higher reading achievement than the children who began getting help at ages four and five. Durkin's first study examined the reading progress of children who began to read prior to school instruction. This was done through systematic testing over a six year period and through periodic comparison with comparably bright non-early readers. Durkin found that both at the start of school and at the conclusion of five years of schooling, higher achievement

was attained by the group who received help with language activities at home at an earlier age than those who did not. In the second phase of this longitudinal study, the progress of early readers over a three-year period was examined. The same examination procedures were used as in phase one with the exception of a slight change in the reading test used. Results of the second phase also showed statistically positive and significant reading progress made by the children who learned to read at home prior to entering first grade. These findings indicate that preschool children who show an interest in reading and who are given answers to their questions and support for their reading behaviors learn to read at home. Preschool readers, on average, enjoy higher achievement in reading in the primary and elementary grades.

Stanovich (1986), in his work concerning individual differences in reading, claims also that early skill development has a direct relationship to later reading performance. His work synthesizes a body of literature concerning individual differences in reading ability. Phonological awareness repeatedly surfaces as the strongest predictor of later reading performance. Much of the research Stanovich reviewed indicated that variation in phonological awareness is causally related, in a positive and reciprocal way, to the early development of reading skill. He found phonological awareness cited frequently as a specific mechanism that enables early reading success. Phonological awareness is a conscious awareness and understanding of the phonemic level of speech and the ability to cognitively manipulate phonemes, or speech sounds, at this level. It is this awareness of the sound-symbol relationship that exists in words and the ability to use this skill in decoding new and unfamiliar words that forms the basis of reading ability. Phonological awareness develops through

experiences with and exposure to language and print. With such experiences comes an awareness of the sounds in speech and of the relationship between letters and their corresponding sounds. A child who develops this awareness early is thus able to use this skill in reading acquisition. The positive and reciprocal relationship to which Stanovich refers is evident by the fact that phonological awareness enhances reading development and this reading development leads to further reading which strengthens and enhances phonological awareness. Phonological awareness is a necessary and key understanding for successful word recognition skills.

Word Recognition Skills

Word recognition skill involves visual identification of a previously met or an unknown word and the process of determining the pronunciation and some degree of meaning of this word (Harris & Hodges, 1995). This skill is also referred to as decoding. Research has shown that a continuous cycle exists in reading development and reading progress over time. Children who do not develop good word recognition or decoding skills in first grade may often experience frustration and difficulty with reading experiences and thus begin to dislike reading. This leads to less and less reading activity by these children, both in and out of school, which further results in failure to receive the practice and experience with reading so necessary for reading development (Durkin, 1966). Stanovich (1986) refers to this cycle as the "Matthew effect" or the "rich-get-richer" notion. Good readers experience success in reading, continue to read more and more, and thus continue to improve their skills. Poorer readers experience difficulty, read less and less than good readers, and thus do not get the

exposure to the reading they so badly need to help them progress. This results in a widening of the gap between good and poor readers as they progress through school. Practice with and exposure to reading provides those children who have advantages in early skill development with an ability to use educational experiences in a more efficient and effective manner. In a longitudinal study of children from first through fourth grade, Juel (1988) also noted the evidence of this vicious cycle. Children who did not develop good word recognition skills read considerably less than good readers and thus experienced fewer opportunities to develop vocabulary, concepts, and ideas which are fostered by wide reading. She postulates that undeveloped word recognition skills may contribute to the steadily widening gap between the good and poor readers in reading comprehension and written stories.

If we believe that a certain amount of remediation and support will enable poorer readers "to catch up" or at least move closer to the performance levels of their peers who are good readers, we may be mistaken. Children who begin school with fewer early literacy skills than their peers seem to be initially disadvantaged. They are unable to take full advantage of the educational experience, they experience difficulty with word recognition and become frustrated, and they subsequently receive less than the desired amount of reading exposure and practice with text in order to make progress. We can, then, expect these poorer readers to fall further behind as they move through school until they reach a point where they can cope with most of the reading required of them "to get through" or they discontinue their formal schooling because it is too difficult for them. Word recognition is an integral part of reading performance.

Reading Performance

In his longitudinal study of children's school performance from kindergarten through adulthood, Kraus (1973) found reading performance, even as early as the primary grades, to be a strong indicator of later reading achievement. Kraus' study attempted to determine if there were any discernible patterns in children's learning processes and how early children's levels of achievement become fixed. As promotion and retention in the elementary grades is based almost entirely on reading proficiency and because success in the junior and senior high grades is also determined by reading achievement, reading performance and achievement were of major importance in his study. The results of Kraus' research into the performance of the students over the years of his study indicated that reading performance in the early years was most predictive of performance in later school years. In his study, Kraus found that children who were performing well in reading at the grade two level continued to do well throughout ninth grade. Also, most of the children who experienced reading difficulties in second grade consistently experienced difficulty and were performing poorly in the reading area in ninth grade. In his attempt to determine how early children's levels of achievement become fixed, Kraus found that by grade three, the reading patterns of most children had been established. He claims that children's performance levels at grade three can be used to predict their performance on into the adult years and for this reason he advises that much concern and thought be given to children who are still struggling with reading in grade three. These findings suggest that if we are to provide support and remediation to children who are struggling with reading, it must be implemented early enough to effect change, that is, prior

to the end of primary school. Otherwise, reading performance levels will be established and therefore be much more difficult to change.

Juel (1988) found that the child who performs poorly in reading in first grade almost always remains a poor reader at the end of fourth grade. Her research focused on the literacy development of children over a four year period and she attempted to find out if the same children remained poor readers year after year, the skills poor readers were lacking, and the factors that seemed to keep them from improving. Through yearly and bi-yearly administration of a battery of tests that assessed such skills as phonemic awareness, decoding, listening and reading comprehension, home reading, attitudes toward reading, spelling, and writing, Juel found that the poor first-grade reader almost always remained a poor reader by the end of fourth grade. The poor readers lacked skill development in phonemic awareness, their spelling-sound knowledge developed slowly, most lacked listening comprehension skills, and most had limited decoding skills. The children's poor decoding skill was a primary factor that appeared to hamper their performance. As outlined in an earlier section, this limitation prevented them from reading as much text as better readers and thus the difference in exposure to print between the good and poor readers grew larger with each grade. Limited reading experiences contributed also to the deficits experienced in listening comprehension.

Reading experiences help children develop reading comprehension which also enhances their ability to comprehend orally presented information. Therefore, children who read less have less well-developed comprehension skills for both reading and listening. For the poorer readers, reading was a difficult and often unsuccessful experience and thus one that

many of them did not enjoy. Juel concluded from her study that despite age of school entry, instructional method, or language, a child who does poorly in first grade is likely to continue to do poorly and that as they get older it is unlikely they will change. She emphasized that early success with reading is most critical and that early success depends to a large extent on a child's beginning school with phonemic awareness development already established. This phonemic awareness refers to the child being aware that words are composed of sequences of sounds. Juel explains that in order for reading instruction at school to be effective, children must have this awareness of phonemes as it enables them to use the skills they are taught. Without this sound-symbol awareness, much of the school reading instruction will be lost as it assumes and requires this knowledge.

Juel examined also the writing progress of the children in her study and concluded that poor readers tend also to become poor writers. In her examination of this group of children who placed in the bottom quartile in reading comprehension at the end of first grade, Juel found that at the end of fourth grade most of the children (twenty-one out of twenty-nine) were still writing descriptions rather than stories. Of this group who experienced difficulty with story-writing, one-third had good spelling but poor ideas, one-third had good ideas but poor spelling, and one-third experienced difficulty in both spelling and generation of ideas. Of the poor writers in her group, she found none who had good ideas and good spelling. On the basis of this information, Juel concluded that poor readers also tend to become poor writers in that they have either difficulty with spelling, with idea-generation, or with both. With an increased awareness that reading and writing develop as interrelated skills within a

child's literacy acquisition, rather than emerging as separate but related skills, we can understand why this would be so. Poor readers tend to be exposed less to print than good readers and spelling depends to a large extent on word-specific knowledge that can be acquired only through exposure to print. Also, extensive reading and listening to stories helps in the acquisition of ideas with which to generate one's own stories.

Some of Juel's recommendations include early phonemic awareness training prior to school entry, and, in the early school years, making certain that children learn to decode in first grade through the use of remediation for those who exhibit deficiencies. Also, for children who experience difficulty, keeping them motivated to read and ensuring that they read and listen to many stories will foster the generation of ideas for the basis of their writing and the development of reading. This motivation is best initiated and developed at home.

Home Factors

Home factors such as parent-child interactions, joint-storybook reading, and family activities involving language development make some of the most significant contributions to children's early literacy development. Much of the research on home factors, highlights the positive impact on reading achievement and the reading performance gains experienced by children who have received language stimulation in the home. These positive home experiences with language include talking with children about everyday experiences, developing positive attitudes toward reading through the presence of, exposure to, and experience with printed material in the home, and through children's observations of significant others engaged in reading activities. Reading stories to children and listening to

them read stories also gives them invaluable exposure to the structure of written language. These interactions better prepare children to take advantage of concepts such as story structure and conventional language use in the educational setting.

As Mason and Allen (1986) indicate in their review of emergent literacy, children begin acquiring knowledge about reading long before they begin formal reading and before they can exhibit any reading skills. In this study, the researchers reviewed emergent literacy research and attempted to relate it to more traditional studies on reading acquisition. Their research review indicated that family and home characteristics such as conversations in the home, attitude toward education, and reading materials in the home, account for more variance in reading ability than does socio-economic status. Conversations in the home and requests for explanations and details of events prepare children for the types of communication they will experience in the school setting. The researchers claim that, while there was no direct evidence available, the lack of parent-supported story activities in the early years was likely to be a contributing factor to the reading comprehension difficulty some children experienced in later grades. Available evidence, however, suggested that storybook reading provides a rich context for language learning and for understanding written stories. Literacy concepts were explained as being relative to two components -- phonological awareness and story understanding, both of which are acquired through informal and adult-directed home and school activities. Mason and Allen concluded that parents who play crucial roles in assisting literacy at home have children who come to school prepared for reading instruction.

Through a naturalistic observation in the home settings of preschool children from low-income families, Teale (1986) conducted a study of the relations between home background and preschool children's literacy development. The significance of home background contributions to a young child's literacy orientation was apparent in his investigation. Teale points out that although income levels may affect the literacy environment in a home because of the constraints it may place on access to literacy opportunities and materials, literacy experiences for preschool children in lower income homes can be just as rich as those in higher income homes and many, in fact, are.

In studying the storybook activities in the homes involved and the resulting skill development of the children, Teale was able to reaffirm that storybook reading experiences further develop children's literacy. He emphasizes the fact that children's progress in reading and writing is the product of adult-child (or sibling-child) interactions which involve literacy, the child's independent explorations of written language, and observations of others using written language. These factors are significant because literacy development does begin so very early in a child's life. These early reading and writing experiences are important in the child's overall literacy development because most of the early skills that foster literacy development are acquired through the home language experiences of the child before he or she enters formal schooling. This solid foundation that is necessary for the success of all later literacy experiences must be firmly established in these early years to enable school literacy experiences to be most effective.

In her studies of young, fluent readers, Clark (1976) identified that parent-child interactions have a significant effect on language development. She advises that it is important to consider the home factors of children who succeed when our "at-risk" estimates may have led to the prediction of failure. A feature of most of the homes from which the early readers in her study came was parental interest in their child's progress and encouragement of independence of choice. A number of the early, fluent readers had interested adults available who devoted time to read to them, to talk to them, or to answer their questions. The crucial role of the environment, the child's experiences, and the importance of significant others to encourage and build upon the child's interests must be taken into account when looking at factors contributing to literacy development.

In their meta-analysis of the available research related to parent-preschooler reading, Bus, van IJzendoorn, and Pellegrini (1995) claim that parent-preschooler reading is related to language growth, emergent literacy development, and reading achievement. These researchers found evidence in several studies that suggest children do learn how to use and understand written language prior to learning the skills necessary for encoding and decoding print. In carrying out their meta-analysis, they expected that preschoolers who were already ahead in linguistic knowledge would maintain their position relative to other children at school and they found evidence to support this. They hypothesized that the age at which children began to be read to would be an important factor, however, few studies reported on the age of onset of this reading to children. Bus et al. found that parents who read frequently to their children are also likely to read more themselves, have more books in their home, and

engage in more literacy-related activities such as trips to the library. Therefore, we can reasonably assume that interest in reading is both a prerequisite and a consequence of book-reading. The researchers concluded that book-reading in the preschool years was as strong a predictor of reading achievement as phonemic awareness. The results also supported the claim that book-reading positively affects knowledge of written language which is necessary for the development of reading comprehension. It appears that reading books aloud to children introduces them to story structure, exposes them to the conventional uses of literacy, and familiarizes them with the grammatical forms of written language and the rules of discourse. These features are prerequisites for understanding text and are not provided by conversation alone. The exposure provided through book-reading increases children's knowledge of written language which is necessary for the development of reading comprehension and hence their reading achievement.

In her exploration of the relationship between joint picture-book reading experiences provided in the home and children's oral language skills, DeBaryshe (1993) studied the home reading experiences of forty-one two-year-old children. This was accomplished through interviews with the mothers in an effort to collect information on family demographics, the child's language history, and the mother's shared book-reading practices with the child. The children's language skill development was assessed through administration of a developmental language scale assessment. DeBaryshe believed in the importance of storybook reading for preschool children and claimed that shared book-reading activities between parent and child appear to facilitate learning. The results of this study indicate that very early reading with

children produce lasting effects in the form of language development (more particularly receptive language development). Reading routines established at an early age may, therefore, play a contributing role in explaining individual differences in early language development and it appears that age at which children begin to be read to is a particularly strong predictor of language skill. In other words, the earlier in the preschool years that a child is read to, the more developed his or her language skills. Children who are read to early in the preschool years have more exposure to language and literacy concepts than children who are read to in later preschool years or not at all. This enables those who are read to earlier to take advantage of literacy skill development earlier. This group then not only has better developed literacy skills when entering school but they have more of the foundation necessary to gain the most from literacy and language instruction in school. The age at which children are read to can be used to predict their level of language skill in relation to those who were not read to early or as early.

Working on the hypothesis that early and intensive exposure to literacy will lead to greater awareness of, and interest in, reading and writing, Mason, Kerr, Sinha, and McCormick (1990) carried out a study which involved the use of a Little Books Program (McCormick and Mason, 1990) in a shared book-reading program with at-risk preschoolers. These Little Books were designed to consist of only six to nine pages, with one simple drawing per page, and with words or phrases that closely matched each illustration. The Little Books were designed to be easy for children to recite and to engage young children's interest. They fostered the development of print awareness. Within the treatment groups, the teacher

and students participated in shared book-reading with the Little Books, with one book per week shared for a total of twenty-eight weeks. The researchers' concern was that children who have not experienced informal literacy activities which promote the initial stages of literacy skill development (eg. letter names) may be at risk of failure. Children who do not experience opportunities to develop early literacy skills may experience failure when they enter school where instruction emphasizes skills both beyond and building on these very early language skills.

Mason et al. use the terms "initial" and "secondary" levels of literacy to identify the skill development progression and fear that if the initial skill levels are not developed through preschool experiences, one cannot successfully master the next, higher level of skill development that schools emphasize. This may place children at risk of failure. The results of this study supported the hypothesis that the Little Books were effective in promoting early literacy development. Therefore, informal shared book-reading enhances certain aspects of early literacy development for at-risk preschoolers. The Little Books intervention helped the children develop letter-naming knowledge which has a significant relationship to subsequent reading progress.

A joint effort by Snow and Ninio (1986) to combine their research perspectives on language acquisition and the contributions made by parent-child reading practices, resulted in a work concerning the contracts of literacy and what children learn when they learn to read books. These contracts of literacy are the basic rules of literacy related to the use of books and the meaning of texts. They contribute to individuals' literacy development through

enabling them to take full advantage of print and what it has to offer. Both contend that book-reading is a powerful source of language development and has positive effects on children's developing communication skills, on vocabulary, and on linguistic forms. Snow's research makes clear the fact that books and storybook reading provide routine, recurrent situations that allow for the development of many literacy skills such as recognizing letters and print concepts. She claims that the ability to understand and produce decontextualized language may be the most difficult yet most crucial prerequisite to literacy. Reading books provides opportunities for this. Ninio claims, in his research, that picture-book reading helps young children internalize basic literacy concepts and skills. Both researchers identify seven important contracts for literacy that are learned by children during storybook reading. These contracts enable children to participate successfully in book-reading interactions which ultimately leads to literacy skill development. The seven contracts for literacy identified by Snow and Ninio include the following: books are for reading, not for manipulating; in book reading, the book is in control and the reader is led; pictures are not things but are representations of things; pictures are for naming; pictures, though static, can represent events; book events occur outside real time; and, books constitute an autonomous fictional world.

Family activities that promote the sharing of ideas and experiences, activities that involve practical or leisure reading in the home, parental support of school, and family use of library resources are examples of family activities that enhance literacy development. These types of family activities promote literacy within everyday communication and social behavior.

In his study of Home Background and Young Children's Literacy Development, Teale (1986) identified nine domains of activity that mediated literacy in the homes involved. These were: daily living routines such as shopping and paying bills; entertainment activities engaged in for enjoyment; school related activities such as attending to school correspondence and assisting with homework; work-related activities such as filling out forms and reading classified advertisements; religious activities such as reading the bible and church pamphlets; interpersonal communication such as sending greeting cards and writing letters; participating in information networks which includes such things as reading books and magazines for information and learning; storybook time; and literacy for the sake of teaching which involves activities designed to help children learn specific literacy skills such as letter formation. From his observation of the extent to which these domains of activity existed in the homes he studied, Teale concluded that it is not the parents' occupation, income, or education that influence the child's literacy development but how they raise their children and the extent of family literacy experiences they are involved in during the preschool years. Literacy is a social process and a cultural package and because of this, children's literacy experiences vary. Teale states that while home background plays a significant role in a young child's orientation to literacy, we must view home background as the complex concept that it is and take into account the economic, social, cultural, and personal factors that influence home background. With several factors involved, there may be many reasons why one family experiences an abundance of literacy-centred activities and while another may experience very few. Teale acknowledges the importance of early literacy experiences to a child's overall literacy

development but states that further research is needed to help us understand the relations between home background and literacy development.

An integrative work by Wigfield and Asher (1984) summarizes several research efforts addressing social and motivational influences on reading. They state that parents' involvement in achievement activities and the value placed on school success appears to make significant contributions to the development of children's achievement motivation. Achievement motivation is explained as an individual's desire to achieve. This may be influenced by a number of factors including an individual's expectancy of achieving a goal, the value one places on the goal attainment, and various motivational processes such as home, school, and peer influences. In other words, an individual's motivation to achieve derives from internal and external factors. The research reviewed by Wigfield and Asher emphasized that there is a positive relationship between the number of books in a home and children's reading ability; that parental involvement in reading to children and the provision of reading material predicts later reading ability; and that it is important for parents to become involved in reading related activities with their children. These family literacy activities help children develop more positive attitudes toward reading and contributes positively to a child's achievement motivation. In other studies reviewed, it was evident that encouraging children to respond verbally to literacy activities in the home enabled their development of letter recognition and thus reading development. Wigfield and Asher express the need to further investigate the reciprocal relationship that exists often in family literacy between parent and child. Children who show an interest in reading often cause their parents to become more involved in reading.

In her study of young fluent readers, Clark (1976) found that many family literacy activities such as parent's encouragement of verbal interaction by their children, provision of reading materials in the home, and frequent assistance with early reading attempts existed in the homes of these early readers. Parental support of education was also crucial to the literacy development of the children. Attention to print in the immediate environment by both parents and children was also noted as a means by which these early readers learned a basic sight vocabulary. In her interviews with parents Clark discovered that, for many of the families of the early readers, offering help to a child who requested it was casual and part of their daily life rather than a separate activity. This atmosphere contributed greatly to the development of positive attitudes toward literacy and to developing a view of literacy as a natural part of family life. Most of the early readers in her study shared common features such as parents interested in their progress and who read to them, extensive use of local library resources as a source of reading material, and varied language activities as part of regular daily living. The contributions these home activities make are numerous and include enabling children to focus on print, to attend to sounds, to develop positive attitudes toward reading, and to receive support for language development which further promotes literacy growth.

Leichter (1984) viewed the family as an environment for literacy development and growth. She organized the ways in which families condition the child's literacy experiences, into three categories. These include the physical environment (resources and types of visual stimulation), interpersonal interaction (moment-to-moment interactions with parents and siblings with respect to corrections, explanations, and other feedback), and emotional and

motivational climate (parental recollections of literacy experiences and the aspirations of family members). Literacy events within family activities include numerous experiences from writing notes, helping with homework, and allowing a child to make decisions, to looking through picture albums. Leichter emphasized the importance of viewing family literacy activities as informal instruction in the course of everyday living. She advocates this informal instruction as essential for the learning of literacy.

Taylor (1995) attempted to gain an understanding of how families in Iceland, a highly literate society, share language and reading-related activities. In his research review, he found several shared literacy activities that occur frequently in many Icelandic homes, including family activities promoting togetherness, family use of the library, parental modelling of reading, practical reading in the home, shared reading by family members, parental support of school, verbal interaction in the home, family television use, and writing activities in the home. He also discovered some features of Icelandic literary traditions that appeared to promote literacy development. These features include shared reading, storytelling and versemaking, and the use of Icelandic folk and fairytales in oral and written traditions. The Icelandic sagas are a favorite subject matter for reading and these people share a strong sense of protection of their language. The traditional literature is proliferated primarily within the home and this literacy involvement can also be attributed to a continued interest in production and appreciation of literacy by all members of society. Within the Icelandic culture there has been a continuous integration of home activities with literacy activities. One example of this is the nightly storytelling that takes place while family members complete

chores. Although this storytelling has been replaced in recent years by a radio program, this program still includes stories and songs. The oral reading tradition continues and there is a great concern that children develop linguistic abilities in several languages including English, Danish, and German. Book production and book ownership are also highly valued and Icelandic families have access to a national library system of which they make frequent use. Taylor found that parental reading for leisure was present in most homes.

Research has repeatedly confirmed the importance of parental reading in developing positive attitudes toward, and motivation for, reading. Resources and activities dealing with the history and literature of the past was frequently observed and contributed to the Icelanders strong sense of identity. Oral discussions and family games involving skills of analysis and strategy were also observed in many homes. These activities contribute to the development of creative and higher-order thinking as well as reading ability. Taylor claims that the most important finding of his study was that the shared family activities he observed closely parallelled the shared family activities previous research has associated with children and emergent literacy development.

In summary, the research evidence is compelling to support the claim that early literacy skill development significantly affects reading performance and that patterns of reading performance are established very early in a child's life. Reading performance in the early school grades is predictive of later reading achievement. In fact, well-developed emergent literacy skills are necessary to enable a child to take full advantage of the educational process and what it offers. Many of the studies concerning successful literacy

development emphasize the importance of emergent literacy skills, word recognition skills, phonological awareness, and positive attitude toward reading. The development of these skills and attitudes is significantly affected by factors within the child's home environment. Shared storybook reading, interactions between parent and child, and family activities centred around literacy experiences contribute to the development of literacy and hence reading performance. Likewise, the absence of any or all of these factors negatively affects literacy acquisition.

In conclusion, attempts to improve literacy levels must include intervention as early as the preschool years, and no later than the primary school years, if educators are to effect change and reduce the risk of reading failure. After this crucial time, reading performance patterns may be firmly established and intervention may not be successful in remediating reading difficulties. To add to the research on reading performance patterns is the subject of this study, the design of which is described in Chapter Three.

CHAPTER III

THE DESIGN OF THE STUDY

The purpose of the present study was to follow the patterns of relative reading performance of a group of students from kindergarten through grade six. This was carried out with a view to determining if reading performance is fixed by kindergarten and if it is not, to determine how it changes over time.

The research reviewed in Chapter II has shown that early literacy skill development significantly and positively affects reading performance and that reading performance in the early grades is a strong predictor of later reading achievement. These early skills are largely developed prior to school entry. Thus many significant factors present in the early preschool years such as rich language stimulation in the home, storybook reading, and family activities centred around literacy play a crucial role in enhancing language development. Likewise, the absence of these significant factors negatively affects literacy development. The research reviewed claims that a child's reading performance at the beginning of school is, most often, indicative of how that child will perform in reading throughout school.

This chapter is organized into two main sections: method and data collection. The method section provides a description of the sample and the instruments used to obtain reading performance measures. The data collection section describes the process involved in obtaining and organizing this data for final analysis.

Method

Participants in this study were 187 preschool students from one school district in the province of Newfoundland and Labrador, Canada. The community from which this sample

was drawn is a rural community with a population of approximately 6,000 people at the time these students attended primary and elementary school. The community, though rural, is the major service centre for other smaller communities within this district for a total population of approximately 12,000.The community services include banks, a shopping centre, a library, a hotel, and a pharmacy. The participants represented three cohorts of students who entered kindergarten in three consecutive school years from 1983 to 1985. In January of the year they began school, all three cohorts were administered a preschool survey, the School Readiness Survey (Jordan and Massey, 1967). In May of each school year from grade one through grade six inclusive, each student's reading performance was assessed with the Gates-MacGinitie Reading Tests (MacGinitie, Kamons, Kowalski, MacGinitie, and MacKay, 1980).

From the data available on students in the school district involved in this study, the researcher chose a group that had been administered the School Readiness Survey in January, 1983 and entered kindergarten the following September. This group was chosen because it was the first group for which there would be a complete data set available, beginning with the preschool survey and continuing on up through grade 12. Initially, the researcher planned to follow this one cohort of students from kindergarten through grade 12 in an effort to follow and analyze their reading performance from school entry through to school leaving. However, as data relating to the reading performance of these students after sixth grade was unavailable, it was decided to follow reading performance from kindergarten through to grade six and to broaden the study by following two additional cohorts of students. This alteration included the selection of two additional groups of kindergarten students for the school years beginning

in 1984 and 1985 respectively. The total number of students who entered school in these three consecutive years was 268. However, students who did not have a complete set of test scores for all seven years were not included. This decision was made as some of the missing data points occurred at what may have been critical points along the education continuum and therefore would prevent the researcher from noting the stability of student performance. The reasons for missing data points may have been students transferring in and out of the district, absenteeism on the day of the testing session, and placement of students in special education and remedial resource classes at some point between grade one and six thus excluding them from the testing. The sample for which complete data was available numbered 187.

Instruments

Two measures were used in obtaining the data on student reading performance: The School Readiness Survey and the Gates-MacGinitie Reading Tests (comprehension section). Each instrument is discussed in turn in the following section.

The School Readiness Survey:

The School Readiness Survey measures a child's development in seven skill areas considered to be related to successful school performance. The term "readiness" is considered currently incomplete for describing children's level of early literacy skill development for reasons articulated in the previous chapter. Recognizing that the title of this assessment tool does not reflect the current terminology of emergent literacy which represents the developmental nature of literacy, the seven subtests of the School Readiness Survey nevertheless parallel what are taken to be measures of early literacy concepts. The seven skill

areas assessed to give the total score are as follows:

1. Number Concepts: six items that require the child to count and a seventh that measures how high the child can count without error.
2. Discrimination of Form: an eleven-item scale designed to measure the child's ability to visually discriminate differences between geometric forms of familiar objects.
3. Color Naming: a seven-color scale to assess the child's knowledge of colors.
4. Symbol Matching: a sixteen-item test that assesses a child's visual perception of similarities between symbols or figures.
5. Speaking Vocabulary: a twenty-item scale designed to determine the child's ability to give the correct word for familiar objects.
6. Listening Vocabulary: a twelve-item scale assessing a child's understanding of the spoken word. This test requires the child to choose the correct one of four objects or situations according to oral instructions.
7. General Information: a variety of questions which measure the maturity of a child's observations.

To obtain a measure of student's relative performance at the preschool level, the total score obtained on the School Readiness Survey was used.

The test-retest method was used in determining the reliability of the School Readiness Survey. This test-retest method was carried out with two groups of children. In both studies, student performance on the re-test correlated highly with performance on the initial test. The coefficient correlations established were .79 for one study and .64 for the other.

Standardization of the School Readiness Survey was completed through the involvement of 383 preschool children from twenty elementary schools in California. Using the Pearson Product Moment Correlation Coefficient teacher ratings on these students in May of their kindergarten year correlated .62 with the total score for the survey.

The Gates-MacGinitie Reading Tests:

The Gates-MacGinitie Reading Tests (Canadian Edition) is a reading assessment tool that evaluates student performance in decoding and comprehension skill in relation to national norms for grades one to six. Each test consists of two subtests -- one on vocabulary and one on comprehension. These subtests were designed to aid teachers in identifying the general reading achievement of their students, in reporting to parents, in determining appropriate levels of instruction identifying students for remedial and advanced work, and in evaluating instructional programs. Only the students' total score on the comprehension subtest was used in this study. The comprehension subtest measures the student's ability to decode words within a passage and to understand the relationship of the words and ideas within the passage to gain meaning from the text.

Standardization of the Gates-MacGinitie Reading Tests was developed from the results of testing 46,000 students (between 3000 and 4500 students at each grade level) throughout the ten Canadian provinces and the Yukon. Each province was represented proportionately on the basis of total school enrollment. Comprehension skill involves the ability to decode words in text as well as to comprehend the meaning. As this study involved an analysis of student reading performance over time, comprehension test scores yielded the

necessary information for data analysis and thus these test scores only were used. Kuder-Richardson Formula 20 reliability coefficients for each test level ranged from 0.85 to 0.92 for comprehension.

Data Collection

The data obtained for this study was collected from pre-existing files containing reading assessment information on the students. Permission to obtain this data was granted by the Assistant Director - Human Resources Division of the school district involved. The data collected consists of the date of assessment, grade level at the time of assessment, student sex, and student reading performance scores from preschool to grade six inclusive. An identification number was assigned to each student and only the relative performance data for each year from kindergarten through grade six (a total of seven performance assessment scores for each student) was collected. There is no identification of any student, parent, or teacher in this study and no identifying information was used in the data analysis.

The collected data was then organized into a system for cross tabulation analysis. Each student's set of data was organized into a 19-digit number which represented nine data points. These data points included the following: a three-digit student number, a two-digit number representing student sex, a two-digit number representing the School Readiness Survey total score, and data points four through nine consisted of two-digit numbers which represented each Gates-MacGinitie Reading Test score from grades one through six inclusive. This method of coding the data enabled a clear analysis of student performance over time.

Analysis of the data involved descriptive statistical analyses consisting of cross-tabulations of each set of yearly assessment results with all successive assessment results from preschool up to and including grade six. This analysis was carried out using the Statistical Package for the Social Sciences -SPSS (Norusis, 1993). Student reading performance was analyzed in terms of the placement of scores in three performance groups - below average, average, and above average thus enabling the researcher to follow student performance over time to determine if reading performance remained at the same performance level, improved, or deteriorated.

CHAPTER IV

FINDINGS AND DISCUSSION

The present study was designed to determine if reading performance is fixed at an early age, and if not, to determine how it changes over time. In this chapter, the findings will be examined in an attempt to answer the questions that guided the study. Each study question is addressed in turn.

Question 1:(a). Is the pattern of reading performance fixed by kindergarten?; (b). by grade one?; (c). by grade three?; (d). and confirmed in grade six?

The relative reading performance patterns of 187 students from kindergarten through to grade six clearly indicate that the pattern is established by grade one and is consistent up through and including grade six.

The pattern of reading performance was not fixed by kindergarten for the below average readers. The majority of students who performed at the below average level in kindergarten reading performed at an average level by grade one. Of this group (103), at some point in their primary and elementary schooling, as few as 12 and not more than 20 (11.7 to 19.4%) remained at a below average reading performance level. For the group (83) who performed at the average level in reading performance in kindergarten, at some point throughout the remainder of their primary and elementary schooling, no fewer than 54 and as many as 69 (65.1 to 83.1%) remained at the average level in reading performance. Table 1 outlines relative reading performance from kindergarten to grade one. For the one student who performed at the above average level in reading performance at kindergarten, with the

exception of the grade two reading performance score, this student remained at the above average level of reading performance from kindergarten through to grade six inclusive.

Table 1

Relative Reading Performance from Kindergarten Through Grade One

Performance Group Composition	Subsequent Performance Placement in Grade One		
	Below Average	Average	Above Average
Below average at school entry [103]	12 (11.7)	88 (85.4)	3 (2.9)
Average at school entry [83]	3 (3.6)	64 (77.1)	16 (19.3)
Above average at school entry [1]	0	0	1 (100)

Note. Numbers in brackets, [ ], represent the original performance group total. Numbers in parentheses, ( ), represent the percentage of the original performance group total.

It is interesting to note that this above-average performer scored only two points below the above average level on the grade two reading assessment, thus placing this student in the average performance group for that year only.

Reading performance was established at the grade one level thus signaling grade one as a critical point for reading development. Of the 15 students who performed at the below average level at grade one, at some point in their schooling between grades two and six, no fewer than 4 and as many as 11 (26.7 to 73.3%) remained at the below average level of

reading performance. Of the 152 students who performed at the average level in grade one, no fewer than 120 and as many as 132 of these students (78.9 to 86.8%) remained in the average group from grades two through six. Of the 20 students who performed at the above average reading performance level in grade one, as few as 9 and as many as 13 students (45.0 to 65.0%) remained in the above average reading performance group from grades two through six. Table 2 outlines relative reading performance from grade one through grade three. It is reasonable to conclude that the majority of students remained at the same reading performance level throughout their primary and elementary grades as that achieved in grade one. This pattern was noted for the below average, average, and above average performance groups. Hence, the findings of this study indicate that patterns of reading performance are fixed by grade one.

These findings corroborate those of Kraus (1973) who found that reading performance was established later in the primary school years and not at the kindergarten level and that reading performance in the early grades is a strong predictor of reading achievement in later grades. Reading performance patterns were established much earlier in this research than in Kraus' study where patterns were established at the grade three level and remained fairly stable in subsequent years.

Table 2

Relative Reading Performance from Grade One Through Grade Three

Performance Group Composition	Subsequent Performance Placement in Grades Two and Three					
	Grade Two			Grade Three		
	B. Avg.	Avg.	A. Avg.	B. Avg.	Avg.	A. Avg.
B. Avg. at Gr. 1 [15]	11 (73.3)	4 (26.7)	0	6 (40.0)	9 (60.0)	0
Avg. at Gr. 1 [152]	14 (9.2)	132 (86.8)	6 (3.9)	11 (7.2)	125 (82.2)	16 (10.5)
A. Avg. at Gr. 1 [20]	0	10 (50.0)	10 (50.0)	0	7 (35.0)	13 (65.0)
B. Avg. at Gr. 2 [25]				12 (48.0)	13 (52.0)	0
Avg. at Gr. 2 [146]				5 (3.4)	121 (82.9)	20 (13.7)
A. Avg. at Gr. 2 [16]				0	7 (43.8)	9 (56.3)

Note. Numbers in brackets, [ ], represent the original performance group total.

Numbers in parentheses, ( ), represent the percentage of the original performance group total.

B. Avg. = Below Average; Avg. = Average; A. Avg. = Above Average

The emphasis placed by Phillips, Norris, and Mason (1996) on the importance of early literacy development to later reading achievement and the claims by Purcell-Gates and Dahl (1991) and by Durkin (1966) that highly developed early literacy skills influence later reading success, and the results of this research stimulate some speculations. While some of the children who performed at the below average level at kindergarten may have done so because of poorly developed early literacy skills, others may have been more responsive to the more formal teaching of reading by first grade given that the relative performance of most students was not established until that time. This result may have occurred because kindergarten is the start of formal schooling. In the home, children are exposed to varying degrees of language stimulation and literacy experiences but few, if any, experienced formal education until kindergarten. While many of the students in this study may have had experiences with books and with being read to, most would not be familiar with the educational environment and the procedures and expectations associated with school such as following oral directions in a testing situation. The School Readiness Survey was administered by school personnel within a school setting and while it is designed to measure skill areas closely associated with reading, it is very likely that the experience of being assessed itself, together with the novel situation, may have had a greater negative effect on some children's performance than on that of others. Furthermore, it is recognized within the school district that the School Readiness Survey has a number of shortcomings as is true of all assessment instruments. Some of these include less than ideal standardization of the administration procedure as some teachers may have been more lenient and "helpful" than others which may

have inflated children's performance scores. Time and staffing restraints often resulted in the survey being administered by a number of different people within the field of early childhood education and language arts. While these individuals brought with them a wealth of knowledge and experience in the reading and language areas, the end result was variation in the administration and scoring of the assessment. This, too, may have affected the relative performance scores of the group. In addition to this concern, while the survey measured skill areas that parallel reading skill development, it assessed each skill in isolation. This decomposition of reading skills cannot accurately represent a child's overall emergent literacy development given that ability to read is not tested solely as a composite of separate skill areas. The School Readiness Survey has obvious limitations in accurately screening children at risk of difficulty with reading. For these reasons, the initial assessment with the School Readiness Survey may not have been ideal. Notwithstanding these concerns, the survey was the only assessment of school entry reading skill available and hence was used as the baseline performance level from which to begin my study.

It is also interesting to note that as early as fourteen years ago, when the first group of students in this study began school, formal instruction in reading did not begin until grade one and the importance of emergent literacy to reading development was just starting to blossom as a topic of significant study in reading research and practice. Even then, children were engaged in many early literacy activities in preparation for learning to read but the formal teaching and subsequent assessment of reading skills did not occur until first grade.

Today formal reading instruction in many school districts, including the one from which this study was done, takes place in the kindergarten year. Children continue to be involved in literacy skill development activities but are also learning word identification, reading simple phrases, and reading storybooks. Thus, it is likely that reading was neither taught nor assessed until grade one. Consequently, it would make sense that patterns of performance would not emerge until grade one when reading was formally taught. Furthermore, home factors have been shown to significantly influence reading performance in school, especially the early home interactions when literacy skills are emerging. It is also quite possible that many of the students in this study who performed poorly on the School Readiness Survey lacked early home language and reading exposure given the delayed emphasis on reading in schools at the time. I suspect that many of the students who continued to do poorly up through grade six may have lacked early language experiences and thus began school well behind the performance potential of many of their peers. Mason and Allen (1986) and Clark (1976) have shown a lack of parent-supported story activities in the early years is likely to be a contributing factor to the reading comprehension difficulties that some children experience in later grades. Teale (1986) found early home literacy influences to be most crucial at the very beginning of a child's literacy development.

Furthermore, Durkin (1966) suggested that children who have difficulty with early reading experiences often become frustrated and therefore read less well. They subsequently do not receive the practice with and exposure to reading that is necessary for their reading skill development. Consequently, they continue to do poorly up through school. The below

average grade one readers in this study may have experienced this very same sort of frustration and lacked practice with reading. Many of the below average readers continued to fall further behind as they moved along the primary and elementary grades resulting in the "Matthew Effect" to which Stanovich (1986) refers. They probably read less and less while their average and above average peers went on to read more and more leading to a widening of the gap between the good (average and above) and poor (below average) readers in the group. The below average group is the one we ought to have been most concerned with for as Anderson (1993) stressed in his work, the first-grader who is experiencing reading difficulty at the end of grade one is in danger of school failure. If, as Anderson suggests, test scores remain stable over time, we must pay close attention to these early below average achievers and focus our intervention efforts at this critical point.

It is important to determine where reading limitations lie. If, as Stanovich (1986) and Juel (1988) contend, poor first-grade readers often lack phonological awareness, it is important to determine which children do in fact require remediation in an attempt to break the cycle of poor phonological awareness leading to poor decoding, less reading, and poor vocabulary and concept development. There is much work to be done at this critical point. We will always be aware that a certain percentage of our poorer readers may have specific learning disabilities thus requiring modifications to their learning environment and that there will be those for whom early literacy concepts are deficit. Despite what the research states about the probability of success for these poor readers at the grade one level, and the fact that

we are unable to determine all factors affecting each child's performance, we cannot ignore these signals but rather attempt to provide support and intervention.

Grade three is also a critical point along the education continuum. Of the 17 students who performed at the below average level in reading at grade three, no fewer than 7 and as many as 10 (41.2 to 58.8%) remained at this performance level from grades four through six. Of the 141 students who performed at the average level in grade three, no fewer than 115 and as many as 129 (81.6 to 91.5%) remained at the average level in reading for grades four through six. Of the 29 students who performed at the above average level in reading in grade three, no fewer than 13 and as many as 18 (44.8 to 62.1%) remained at this performance level for grades four through six. Table 3 outlines relative reading performance from grade three through grade six. The reading performance patterns established in grade one continue to be fixed at the grade three level and remain consistent up through elementary school. In his longitudinal study of reading performance, Kraus (1973) found grade three to be the critical point at which reading performance becomes fixed and because of this, he advises that much concern be given to students who are struggling with reading in grades one and two. The findings of the present study indicate that while the reading performance patterns that exist in grade three remain fairly stable up through grades four, five, and six, these patterns are established by grade one. Educators need to be concerned with students who are experiencing reading difficulties at the preschool and kindergarten levels and to implement intervention strategies at these critical points. Kraus found that the third grade reading scores of the

Table 3

Relative Reading Performance From Grade Three Through Grade Six

Performance Group Composition	Subsequent Performance Placement in Grades Four, Five, and Six								
	Grade Four			Grade Five			Grade Six		
	B. Avg.	Avg.	A. Avg.	B. Avg.	Avg.	A. Avg.	B. Avg.	Avg.	A. Avg.
B. Avg. at Grade 3 [17]	10 (58.8)	7 (41.2)	0	7 (41.2)	10 (58.8)	0	8 (47.1)	9 (52.9)	0
Avg. at Gr. 3 [141]	9 (6.4)	129 (91.5)	3 (2.1)	12 (8.5)	120 (85.1)	9 (6.4)	14 (9.9)	115 (81.6)	12 (8.5)
A. Avg. at Gr. 3 [29]	0	16 (55.2)	13 (44.8)	0	14 (48.3)	15 (51.7)	0	11 (37.9)	18 (62.1)
B. Avg. at Grade 4 [19]				8 (42.1)	11 (57.9)	0	9 (47.4)	10 (52.6)	0
Avg. at Gr. 4 [152]				11 (7.2)	128 (84.2)	13 (8.6)	13 (8.6)	121 (79.6)	18 (11.8)
A. Avg. at Gr. 4 [16]				0	5 (31.3)	11 (68.8)	0	4 (25.0)	12 (75.0)
B. Avg. at Gr. 5 [19]							11 (57.9)	8 (42.1)	0
Avg. at Gr. 5 [144]							11 (7.6)	119 (82.6)	14 (9.7)
A. Avg. at Gr. 5 [24]							0	8 (33.3)	16 (66.7)
B. Avg. at Gr. 6 [22]									
Avg. at Gr. 6 [135]									
A. Avg. at Gr. 6 [30]									

Note. Numbers in brackets, [ ], represent the original performance group total. Numbers in parentheses, ( ), represent the percentage of the original performance group total.

B. Avg. = Below Average; Avg. = Average; A. Avg. = Above Average

participants in his study could have been used to predict their subsequent success or failure. In my study, first grade reading scores could have been used to predict the subsequent success or failure of the participants, at least up to the end of elementary school, the time frame for this study.

From kindergarten to grade three, children learn and develop reading skills and most of their reading and language activities involve building on these skills and developing new ones. Even though refinement continues throughout life, after grade three, much of the reading foundation has been built and students then use their reading skills to learn and broaden their education in other areas. The process has often been referred to as "learning to read" from kindergarten to grade three and from grade four on it has been referred to as "reading to learn" in content areas such as science, social studies, religious education, and health education. Mathematics, too, in the elementary grades, involves reading as children are required to problem solve with word and story problems. The transition to reading to learn is precisely what makes grade three such a critical point. For those children who are behind in reading performance, they are at risk of school failure as their educational experiences require a level of reading that they may not have achieved. It is often at this critical point (grades three and four) that many children are identified as having reading problems and are subsequently referred for remedial support.

Students' reading performance in grade six shows that 22 students (11.8%) placed in the below average group, 135 students (72.2%) placed in the average group, and 30 (16.0%) placed in the above average group. A comparison of these findings with the performance

group compositions for each of grades one through five, is further evidence that the pattern of reading performance established at grade one is more or less maintained throughout the primary and elementary grades. Table 4 illustrates this.

Table 4

Reading Performance Group Placement of Students from Grades 1 through 6

	Performance Group		
Grade	Below Average	Average	Above Average
1	15 (8.0)	152 (81.3)	20 (10.7)
2	25 (13.4)	146 (78.1)	16 (8.5)
3	17 (9.1)	141 (75.4)	29 (15.5)
4	19 (10.2)	152 (81.3)	16 (8.5)
5	19 (10.2)	144 (77.0)	24 (12.8)
6	22 (11.8)	135 (72.2)	30 (16.0)

Note. Numbers in parentheses represent the percentage of the total group (Total = 187).

Returning to the work of Kraus (1973), it is important to note that the best readers in grade six were also the best readers in grade two and they scored consistently above the norm. This trend is evident in the present study. Furthermore, he found the poorer readers demonstrated their difficulties as early as grade two and most continued to experience reading

problems. In this study, the poorer readers demonstrated their reading difficulties at the grade one level, but like those in Kraus' study, most continued to experience difficulties through to, and including, grade six.

From this longitudinal study of relative reading performance from school entry up to and including grade six, it is evident that early success with reading and early reading skill development affects the course of students' reading performance throughout primary and elementary school. There is minimal movement of students from one performance group to another, but the patterns established in grade one are fairly consistent throughout primary and elementary school and are confirmed in grade six. This pattern is consistent with the findings of Kraus (1973), Phillips, Norris, and Mason (1996), and Juel (1988) who conducted investigations at different times and with different groups and who found evidence which supports the findings of this study. Research reviews conducted by Stanovich (1986) and Bus, van Ijzendoorn, and Pellegrini (1995) also confirm that relative reading performance patterns are established in the primary school years and are confirmed in later school years.

Educators continue to be concerned with the reported high illiteracy rates in Newfoundland and Labrador, and with good reason. We must ask questions such as, "With any particular group of children, how many below average readers could be achieving at an average or above average level?", "How many average readers might have the potential to achieve in the above average range?" We should be pleased that patterns of performance remain relatively stable for those in the above average group but we should not be content that, on the other hand, the majority of those in the below average group remain there. Early

reading performance patterns and their stability over the school years is just as evident in this locally studied population as in studies elsewhere. We have no reason to think that these findings are unique to this particular group, school district, or period of time. I suspect that this trend continues to exist today and that for children who begin school with less than average early literacy skill development, their reading performance patterns are already determined and they are at risk of school failure.

Undoubtedly, we experience a degree of success with some of our reading interventions. However, most intervention is implemented after first grade and is often too late to be most effective. If we are to break the cycle of poor reading performance we must intervene before performance levels become fixed. In our efforts to plan support strategies for students who are performing at below average levels, we may ask ourselves what differences exist between the good and poor readers. Keeping in mind again that we cannot be aware of all underlying factors that may have affected early reading development, I suspect that parent-child interactions in the preschool years and the degree to which early literacy development was fostered in the home are significant factors. We need only to reflect on the evidence in Teale's observations (1986) and in Clark's study of young fluent readers (1976) to endorse the effect that parent-child interactions have on language development. There is abundant evidence in the investigations of Bus, van IJzendoorn and Pellegrini (1995) that preschool children who have well-developed language and literacy skills, developed through parent-preschooler reading and language activities, are ahead of their peers and maintain this relative position throughout schooling. Children who are read to early in the preschool years

and who are involved in other language-rich activities have more exposure to language and literacy concepts than children who are not so involved. This exposure enables those who are read to earlier to maximize literacy skill development. This group has better developed literacy skills when they enter school and therefore have more of the foundation necessary to take advantage of and gain more from the reading and language experiences in school. I suggest that this is precisely where the differences exist between the good and poor readers in early primary school. It results in performance differences and the establishment of relatively stable patterns of relative performance throughout primary and elementary school as the poorer performers never seem to be in a position to gain what is needed for them to move into a higher performance group. In other words, those children who are in a deficit position at the very beginning seem unable to fill these deficits and to catch up with their counterparts as the schooling process assumes prior skill development that for them, simply does not yet exist. They are always a set of steps behind and the good readers move ahead at a pace more accelerated than the pace of poor readers. A re-examination of when performance patterns are firmly established will give further insight into the timing for strategic planning for change.

Question 2: If the pattern of reading performance is not fixed by kindergarten, how does it change over time?

The pattern of reading performance of the 187 students in this study was not fixed by kindergarten, but rather by grade one where the patterns for the majority of students were established and remained constant through to and including grade six.

In kindergarten, student performance fell into three performance groups and was composed as follows: below average (103 students), average (83 students), and above average (one student). By grade one the composition of student performance shifted as follows: 15 below average, 152 average, and 20 above average. These shifts in performance levels are described by starting with the below average kindergarten group (103), of these only 12 remained at this level by grade one, 88 progressed to the average performance group, and three progressed to the above average group. Moving to the average kindergarten group (83), 64 remained in the average group in grade one, three students regressed in performance to below average, and 16 students progressed to above average performance. Finally, the one student who was above average at kindergarten maintained the same performance level in grade one. These results represent the reading changes over time from kindergarten to grade six inclusive. In effect, there were no significant changes in students' patterns of reading performance beyond grade one.

It is likely that the reading performance patterns of these students were latent in kindergarten. Their performance likely became more apparent by grade one when reading was more formally taught, expected, and assessed. On the basis of research by others (Durkin, 1966; Kraus, 1973; Mason and Allen, 1986; and Phillips, Norris, and Mason, 1996), it is predictable that students who were behind in literacy development were not able to gain as much from their educational experiences as their peers who had highly developed literacy skills. Thus, these children consistently remained behind the better readers in language development and reading performance. Without intervention to compensate for reading

weaknesses at the critical grade one point, no measurable gains were achieved by the below average readers from grade one through to grade six. Equally important is the observation that many average readers who might have enhanced their reading skills, failed to do so.

The composition of each performance group (below average, average, and above average) remains the same from grade one through to grade six inclusive. With any assessment, it is reasonable to expect a normal distribution of performance scores in a sample population with the majority of students scoring in the average range. The reading performance scores throughout this study follow the normal distribution patterns expected. The most alarming finding of this study, however, is that it is the same students who remain in each of the performance groups throughout primary and elementary school. One of the most important reasons for assessing student performance is to also assess the need for instructional change and intervention, especially at critical points along the learning continuum. It is the pattern of each student's performance in this study that causes concern. The finding of most import is that from grade one through to grade six, most students remained in the exact same performance group regardless of whether they were performing well or poorly. This alerts us to the critical points for reading development and should provide motivation for us to intervene at the preschool level to end this repeating pattern and to change it in positive ways.

Questions 3, 4, and 5: For students who are performing below average, at an average level, and at an above average level at kindergarten (as determined by the School Readiness Survey), does the reading performance of these students improve, deteriorate, or remain the same over the course of their primary and elementary schooling?

The majority of students in all three performance groups maintain the same level of reading performance from grade one through to grade six inclusive. Had there been performance shifts in any or all of the three performance groups from grade one through to grade six, these three questions would have been answered separately with discussion of the performance improvement or deterioration that occurred for each group. In light of the findings, questions 3, 4, and 5 are discussed together in this section. The findings suggest that for the majority of students in this study, by the time reading was formally taught and assessed, at the grade one level, performance in reading was established and remained unchanged over the subsequent primary and elementary school years. The only notable reading performance changes experienced by these students occurred between kindergarten and grade one for the below average and average kindergarten performers. These changes include the following: for the below average kindergarten performers (103), the majority of them (88) improve their performance and move to the average performance group and three progress to the above average group; for the average kindergarten performers (83), a small number of them, (16), improve their performance and move to the above average performance group in grade one. The above average kindergarten performer remains in this

group throughout primary and elementary school. Beyond grade one, the reading performance of students in all three performance groups remains the same.

Returning to the findings from earlier research by Durkin (1966), Kraus (1973), Purcell-Gates and Dahl (1991), and Phillips, Norris, and Mason (1996), it can be expected that reading performance in the early grades may be predictive of later reading achievement. In this local investigation of the relative reading performance of students from kindergarten to grade six, students remain in the same performance group established in grade one throughout all six years of primary and elementary schooling. Fortunately, there is no measurable performance deterioration. However, there were no measurable gains either and where each child placed in reading performance level at grade one is precisely the same level each of them remained throughout primary and elementary school. Thus, the early reading performance of these students is predictive of their later reading achievement. For this group of students, reading performance was established quite early and remained unchanged over the course of their primary and elementary schooling.

Question 6: Does the distribution of boys and girls in the below average, average, and above average reading groups from kindergarten to grade six differ?

The distribution of boys and girls in each performance group from kindergarten to grade six is presented in Table 5.

Table 5

Distribution of Boys and Girls in Each Reading Performance Group by Grade Level

Grade	Performance Group					
	Below Average		Average		Above Average	
	Boys	Girls	Boys	Girls	Boys	Girls
Kindergarten	55	48	32	51	0	1
	(63.2)[1]	(48.0)[1]	(36.8)[1]	(51.0)[1]	(0)[1]	(1.0)[1]
	(53.3)[2]	(46.6)[2]	(38.6)[2]	(61.4)[2]	(0)[2]	(100)[2]
1	13	2	66	86	8	12
	(14.9)[1]	(2.0)[1]	(75.9)[1]	(86.0)[1]	(9.2)[1]	(12.0)[1]
	(86.7)[2]	(13.3)[2]	(43.4)[2]	(56.6)[2]	(40.0)[2]	(60.0)[2]
2	21	4	60	86	6	10
	(24.1)[1]	(4.0)[1]	(69.0)[1]	(86.0)[1]	(6.9)[1]	(10.0)[1]
	(84.0)[2]	(16.0)[2]	(41.1)[2]	(58.9)[2]	(37.5)[2]	(62.5)[2]
3	13	4	64	77	10	19
	(14.9)[1]	(4.0)[1]	(73.6)[1]	(77.0)[1]	(11.5)[1]	(19.0)[1]
	(76.5)[2]	(23.5)[2]	(45.4)[2]	(54.6)[2]	(34.5)[2]	(65.5)[2]
4	11	8	71	81	5	11
	(12.6)[1]	(8.0)[1]	(81.6)[1]	(81.0)[1]	(5.7)[1]	(11.0)[1]
	(57.9)[2]	(42.1)[2]	(46.7)[2]	(53.3)[2]	(31.2)[2]	(68.8)[2]
5	9	10	68	76	10	14
	(10.3)[1]	(10.0)[1]	(78.2)[1]	(76.0)[1]	(11.5)[1]	(14.0)[1]
	(47.4)[2]	(52.6)[2]	(47.2)[2]	(52.8)[2]	(41.7)[2]	(58.3)[2]
6	12	10	63	72	12	18
	(13.8)[1]	(10.0)[1]	(72.4)[1]	(72.0)[1]	(13.8)[1]	(18.0)[1]
	(54.5)[2]	(45.5)[2]	(46.7)[2]	(53.3)[2]	(40.0)[2]	(60.0)[2]

Note. Total number of boys in the study = 87; Total number of girls in the study = 100

[1]The percentage of the total number of boys or girls in the study.
[2]The percentage of the total number of students in that particular performance group (ie. below average, average, above average), at that grade level.

Chi-square results for kindergarten, χ_2 (2, 187) = 4.9, p = .08, indicate no systematic relationship between gender and reading level. This means, at the kindergarten level, the variables of gender and reading level may be considered statistically independent.

The chi-square results for grade one, χ_2 (2, 187) = 10.6 $p < .05$), indicate a systematic relationship does exist between gender and reading level. From Table 5, it appears that the difference in the relationship is the proportion of boys in the below average group. Chi-square results for grade two, χ_2 (2, 187) = 16.4 $p < .05$, and for grade three, χ_2 (2, 187) = 7.9 $p < .05$, indicate a systematic relationship exists between gender and reading level in these grades as well. Again, it appears that the difference in the relationship is the proportion of boys in the below average reading group (see Table 5). Chi-square results for grade four, χ_2 (2, 187) = 2.5, p = .29, grade five, χ_2 (2, 187) = .26, p = .88, and grade six, χ_2 (2, 187) = 1.08, p = .58, indicate no systematic relationship between gender and reading level. This means, at grades four, five, and six, the variables of gender and reading may be considered statistically independent.

The findings indicate there were no differences in the distribution of boys and girls in each performance group for kindergarten and for grades four, five, and six. However, for grades one, two, and three there were differences in the distribution of boys and girls, with boys proportionally distributed more in the below average reading performance group for all three grades than were girls.

The distribution of boys and girls in each performance group in my study are of interest for several reasons. Firstly, the grades at which there are significant performance

differences in reading for boys and girls (grades one, two, and three), are at a critical time when students are "learning to read". When they have acquired reading skills and begin to use these skills in "reading to learn" in order to broaden their knowledge base (in grades four, five, and six), the performance of boys and girls was no longer significantly different. In an investigation of sex differences in reading acquisition, Smith (1981) proposed that the perceptual and cognitive differences between males and females originates in differences in maturation rates of the left hemisphere of the brain which controls language development. In boys, a slower maturation rate may result in them relying more upon the right hemisphere for learning. Females, on the other hand, are able to use their language development much earlier than boys. This suggests that boys may experience difficulties with language development in the early school years but when the language centre of the brain has matured for them, they are able to utilize left-brain learning and thus experience similar levels of reading achievement as those of girls. Interestingly, Smith further commented that in the early school years, boys often demonstrate skill in spatial tasks and are therefore more adept than girls on science and mathematics activities.

Investigations into the prevalence of reading problems for boys compared to girls by Finucci and Childs (1981) and by Bakker and Moerland (1981), provide further evidence that girls do, on the average, have better developed verbal skills and thus do better on most reading tests than do boys. These researchers found that while girls read somewhat better on average than boys during the primary school years (ages five to eight), by elementary school, boys tend to catch up with the girls. This again suggests that boys experience more difficulty

than girls with language acquisition and development and thus take longer to develop successful reading skills. However, they catch up with the girls by the elementary grades (ages nine to eleven) suggesting that, with the development of the necessary reading skills (even though language may be delayed when compared to girls), they experience reading success. Possibly, the findings of my study which indicate significant performance differences between boys and girls in the primary grades, may be related to differing maturity rates of the left hemisphere of the brain in boys and girls and hence, the boys experienced more difficulty with language acquisition in the early grades. When boys reached a similar developmental level as that of girls and were able to use left hemisphere modes of learning, they "caught up" with the girls.

Secondly, it may be true that girls experienced higher levels of verbal achievement than boys during primary school as these early years involve a very high degree of language-based learning. However, by the time students reached elementary school, boys may have flourished in their verbal skill development and since the emphasis is less on verbal achievement, their reading achievement levels more closely matched those of girls. An extensive investigation of sex differences in ability and achievement by Levine and Ornstein (1983) included an examination of educational progress reports on reading and mathematics in the United States for the years 1971, 1975, and 1980. The progress of students at ages 9, 13, and 17 was reported. In 1971, females had higher reading achievement than males at all three age levels and while this performance gap narrowed slightly between 1971 and 1980 for all three groups, females still scored approximately 5% higher in reading than did males.

Levine and Ornstein claim that the differences between boys and girls in school performance may be narrowing and it is not certain to what extent these represent biological differences in average ability. Their research highlights the point that because boys may experience lower verbal achievement than girls in the early primary grades, they may be at a disadvantage in a school system which, at the primary level, emphasizes verbal learning.

These first two points further confirm that the end of primary school (grade three) is a critical point in reading development. Students, particularly boys, who continue to experience reading difficulties at this point present a concern because despite early identification and intervention for reading difficulties, perhaps some of the boys have begun to be perceived as behavior problems. Reflecting on the advice of Kraus (1973) we are, once again, reminded to show concern for students who continue to struggle with reading by grade three.

A third note is when children in my study were in primary school, there was a widely held belief that reading was a female activity. This belief continues to exist to some degree. Reading, seen as a passive activity, was encouraged for girls whereas boys were encouraged to participate in more physical types of activities such as sports. In many homes, stories were often read by the mother, further modelling reading as a female activity. Levine and Ornstein (1981) discussed differing sex-role patterns and expectations placed on boys and girls which may affect their academic performance. Differing expectations include factors such as teachers possibly expecting less of girls on mathematical performance and more of girls and less of boys on literacy performance. Flynn and Rahbar (1994) attempted to determine if there was

any basis for the belief that boys are at greater risk of reading failure than are girls. They reviewed studies which found no significant difference in the prevalence of reading disability for boys compared with girls in second and third grade when standardized testing was used to determine reading disability. However, when teacher referrals were used to determine students requiring support for reading disability, school personnel had identified more boys than girls as reading disabled. They further found boys were often referred for special services for behavioral concerns rather than for reading difficulties. Girls who may have had reading problems were often not identified because they may have been more passive and less disruptive than boys. This higher proportion of boys in special programs leads to the erroneous perception that more boys than girls have reading problems and often results in overlooking girls who do require support. Girls may be noticed and referred for support only when their academic achievement reaches a very low level. It is possible because of these social behaviors and cultural expectations, the girls in my study were involved in more reading and language activities at an early age and thus, were better prepared for success in reading beyond kindergarten when reading was taught. As a result, boys may have been behind in reading achievement initially, but progressed to the achievement level of the girls by the elementary grades.

Such sex stereotyping is a value issue and a social one that is both a research and ethical matter in a time when literacy is a goal for all children. We may not be certain of the factors that come into play in reading performance differences between boys and girls at the primary grades. It is quite clear in this local investigation of reading performance over time

that when reading instruction began, in grade one, and continued throughout the primary grades, girls performed significantly better than did boys in reading. For the elementary school years, however, boys performed as well as girls as there were no significant differences in the distribution of boys and girls in any of the three performance groups. This preceding discussion of the findings helps to explain possible reasons for the distribution patterns noted and the fact that boys were proportionally more distributed in the below average reading group in the primary grades. However, both boys and girls are similarly distributed in kindergarten and in the elementary grades. Three main points can be extracted from these results. In kindergarten there is no difference between boys and girls performance distribution. In the primary grades (grades one, two, and three) there is a difference between boys and girls in performance distribution. In the elementary grades (grades four, five, and six) there is, again, no difference between boys and girls in performance distribution. I will proceed to discuss each of these in turn. At the beginning of school there was no difference in the reading performance distribution of boys and girls. An analysis of student performance indicates that only during the primary school years was there a systematic relationship between gender and reading performance with the difference being the proportion of boys in the below average group. How can we explain the lack of performance differences in the school entry year, yet for grades one, two, and three, there were differences? A delay in language development for boys only partially explains this finding. As Bakker and Moerland (1981) proposed, this language delay would result in boys experiencing more difficulty with successful reading skill development than did girls. However, other factors are obviously involved. If boys are not

as verbally mature as girls, we would expect distribution differences between them from the outset (kindergarten). I suspect that factors within the home during early literacy development may have resulted in all children reaching similar literacy development levels at school entry and thus similar performance levels for the first year. These home factors include parents holding similar expectations for boys and girls with few, if any, preconceived notions about boys possibly being behind in language development. Keeping in mind that, at the time these students started school, the concept of emergent literacy was just beginning to develop, these home factors may also have included fewer home literacy experiences than are likely today. With fewer community education initiatives about the importance of reading development during the early years, parents frequently left the responsibility for reading development to the school. Therefore, in kindergarten, the performance of boys and girls was similarly distributed across all three performance groups.

In grade one, where reading was formally taught and assessed, and continuing throughout primary school, we see a systematic relationship between gender and reading performance. Given the sameness of the distribution in kindergarten, why are there now proportionally more boys distributed in the below average reading group for all three primary grades? I propose that the underlying factor which comes into play here is the school and the schooling experience to which these children are now exposed. In a previous section, I commented on how inexperience with school and the schooling situation may have affected students' performance on The School Readiness Survey and that subsequent experience with school and with testing situations may have influenced their performance on subsequent

reading assessments. Experience with the school environment affects all aspects of a student's performance, not just testing situations. In attempting to understand the influences of school on student performance, we must consider three factors: teacher attitude and expectations; student behavior and performance; and the complex classroom environment that both influences and is influenced by teacher and student interaction.

Flynn and Rahbar (1994) identified that teachers may hold incorrect assumptions about student abilities based on sex and thus expect boys to experience more difficulty than girls on reading tasks. Pace and Powers (1981), in studying the relationship between teacher behavior and student reading, concluded that one way in which teachers affect student behavior and achievement is through the expectations they hold. These expectations are sometimes based on evidence of students' ability and at other times, have no valid base but derive from teachers' erroneous preconceptions. The evidence found by Pace and Powers indicated that, over time, students may begin to behave as teachers expect them to. In my study, it is quite possible that, in the primary grades, differing teacher expectations for boys and girls in the reading area (due to the perception of boys as having more difficulty) resulted in boys not being challenged to perform at higher levels. Student performance, to a large degree, is influenced by the expectations set for them, the instructional strategies used to achieve those expected levels, and the extent to which students conform to teachers' expectations. In the early school years of the students in this local study, it is possible that lower reading expectations for boys resulted in lower reading performance which would further result in a performance distribution difference between boys and girls. Continuing to

speculate about how teacher expectations may have further influenced learning in the reading area, if instruction was focused on average performance as it often is, it is possible that while boys may not have reached their full potential, girls may not have been challenged to extend their reading development either, but rather performed at average levels and remained there. In an effort to at least bring boys to average performance levels, girls' average reading development may not have been a priority for improvement. Student learning does not occur in a vacuum but is often dependent on and influenced by the classroom environment (Baumann and Duffy, 1997). In other words, instructional planning that focuses on average or mainstream achievement is often conducted to the detriment of those at the extreme ends of the learning potential scale as their needs may sometimes go unnoticed. These factors, together, may have resulted in performance distribution differences in grades one, two, and three.

When students reached elementary school and the language development of boys reached a similar level to that of girls, we see no differences in performance distribution between boys and girls. Why, then, are there suddenly no performance differences when all children have been taught using the same reading programs? One would expect that the girls, who were ahead in reading performance in the primary years, would continue to progress and to maintain their reading performance advantage over boys. It is possible that the reading performance of the girls was, for the most part, average and continued to be supported at this average level. Perhaps, as Flynn and Rahbar (1994) have suggested, because of their passive nature girls' needs were not as readily identified. This not only resulted in the possibility of

overlooking girls who needed support for reading difficulties but may also have resulted in overlooking girls who could have been performing at higher reading levels. Again, in an effort to bring boys up to the average performance level, girls' performance may not have been a priority. Levine and Ornstein (1983) recommended that educators pay particular attention to the special needs of boys who experience language delay compared to girls and who may be misdiagnosed with reading problems due to their disruptive behavior. I would add further that it is not only boys who may be overlooked or shortchanged in the area of reading development but girls as well. Often, because we expect girls to have fewer reading problems, we may overlook their difficulties when in fact they may need to be supported as well. Monitoring of student reading progress must begin very early in the preschool years and continue throughout primary and elementary school if we are to ensure that all students are being challenged.

One of the major concerns I have expressed throughout the discussion of my findings is that, as educators, we may be satisfied with a group of students who are performing at average levels in reading if they maintain this performance level. However, in our acceptance of these 'adequate" results, we may be neglecting those students who might possibly perform at yet higher levels. This group of students might include boys and girls who are performing at average levels because that is all we expect of them. If we do not challenge their potential and enhance their reading instruction, they will have no reason to improve. The task may not be a simple one but we need to monitor individual achievement in order to provide a reading environment that challenges children's abilities and skills to reach their highest reading

potential. There will be some who are not up to the challenge and we will identify their needs and limits. For those who are up to the challenge, we must enable them to reach their potential. If our goal is to improve the literacy levels of our students, we must strive for the highest levels for all. This longitudinal analysis of the reading performance of 187 students highlights several important findings. These findings alert us to some crucial matters that must be taken into account in our efforts to raise literacy levels in our province and to ensure our students' reading performance is comparable to that of students at the same grade level in the rest of Canada.

Suggestions for consideration arising from this study may give insight into how we can enhance reading performance in our students and offset the potential for reading failure and are the subject of my final chapter.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND SUGGESTIONS

In this final chapter, I provide a review of the study, concluding remarks about the findings, and suggestions that have evolved from the study.

Study In Review

This study investigated the relative reading performance, from kindergarten through to grade six inclusive, of 187 students from a rural school district in Newfoundland and Labrador, Canada. The aim of the investigation was to determine when reading performance patterns are established, to determine critical points for reading achievement over the course of primary and elementary school, and to determine whether a systematic relationship exists between gender and reading performance.

Reading performance scores were obtained for the school years from kindergarten through to grade six for three cohorts of students who entered kindergarten in 1985, 1986, and 1987 respectively. These scores were then analyzed statistically through cross tabulation analyses which enabled an examination of each student's relative performance placement throughout the primary and elementary school grades. This study of each of three relative performance placement groups (below average, average, and above average) for each grade level allowed the researcher to follow students' relative reading performance through each grade up to and including grade six.

A review of the research related to reading development and student reading performance included an examination of early literacy concepts, word recognition skills, reading performance over time, and home factors that affect reading development. The salient

features of this research review include factors that significantly affect reading achievement and the early establishment of reading performance patterns.

The development of early literacy concepts was seen as a crucial factor in reading achievement in later grades. Factors that exist in the child's home environment in the preschool years such as parent-child interactions, joint-storybook reading, the presence of reading materials in the home, and the development of positive attitudes toward reading and education are of significant importance to reading performance throughout school. Evidence is available in the literature to support the claim that early literacy development significantly affects reading performance and is predictive of later reading achievement. The existence of critical points for reading development along the primary and elementary school continuum was highlighted throughout this investigation indicating that concern for reading performance continues beyond the emergent literacy level. The beginning and ending of both primary and elementary school signal a need for further concern.

Reading performance at kindergarten and grade one must be monitored closely in order to identify reading difficulties and provide support for these difficulties to ensure success for all students. Failure to identify and support at this critical point would mean some children may experience reading failure throughout the remainder of school and beyond. Reading performance at the grade three level is also of critical importance as students in grade three are required to use their established reading skills to broaden and enhance their knowledge in the different subject areas of school. Students who continue to struggle with reading in grade three will, most likely, experience failure in other subject areas and in

subsequent grades. Students who are very successful readers at the grade three level can be challenged to enhance their reading performance. This further confirms the importance of identifying and supporting reading performance at grade three. At the end of elementary school, there may be many students who continue to struggle with reading and others for whom reading performance is highly developed. Supportive efforts at the grade six level will provide continued assistance to students in developing improved reading skills and in reaching their reading performance potential before entering junior high school.

Differences in developmental progress for boys and girls in the primary grades may affect reading performance and requires attention. It is equally important to hold similar reading performance expectations for boys and girls to ensure that all students are encouraged to work to their highest potential. The following section provides concluding remarks about the study findings.

Conclusions

This investigation of student reading performance from kindergarten through to grade six inclusive clearly indicates that the pattern of reading performance is established by grade one and is consistent up through and including grade six. Conclusions drawn from the findings confirm critical points for reading development that warrant further attention.

1. Reading performance patterns were not fixed at the kindergarten level. These patterns became evident at the grade one level when reading was more formally taught and assessed and when students were more familiar with the school setting and testing situations.

2. The composition of each performance group (below average, average, and above average) remained the same from grade one throughout the remainder of primary and elementary school. When reading performance patterns were established at grade one, they remained unchanged with the same students remaining in each of the three performance groups. There was no measurable performance deterioration but there were also no measurable performance gains and where a student placed in reading performance at the grade one level is precisely where he or she remained at the end of grade six.

3. The majority of students who were performing at the below average reading level at kindergarten, (85%), improved their reading performance to the average level by grade one. Nineteen percent of students who were performing at the average level at kindergarten improved to the above average level by grade one. These were the only notable performance changes experienced by students in the study. In effect, there were no significant changes in students' patterns of reading performance beyond grade one.

4. There are no differences in the distribution of boys and girls in each of the three reading performance groups for kindergarten and for grades four, five, and six. However, for grades one, two, and three, there were differences in the performance distribution of boys and girls with boys proportionally distributed more in the below average reading performance group than were girls for all three grade levels.

The findings of my research lead to suggestions for consideration in our ongoing attempts to improve literacy levels in the province. The next and final section presents the suggestions that evolved from this study.

Suggestions For Consideration

A number of literacy initiatives are currently being undertaken in Newfoundland and Labrador. The findings of this study, together with the supporting research, suggests that there is still much we can do, especially in the area of early literacy development and in ensuring that our students receive support at critical points throughout their primary and elementary schooling. The following points outline suggestions for consideration to improve literacy initiatives.

1. Reading performance patterns are established at grade one and remain consistent throughout primary and elementary school. Efforts to improve the literacy levels of our students must include an assessment of children's emergent literacy development prior to school entry and intervention during the preschool and kindergarten years. The results of these assessments should inform the nature and type of immediate intervention and support to be given. This will help to ensure that emergent literacy skills so necessary for reading success are developed and enhanced for all children to enable them to take full advantage of the formal teaching of reading at school. It will also help to ensure that reading performance patterns established in grade one are successful ones.

2. Monitoring of student reading achievement throughout the primary and elementary grades must become a priority. Standardized assessments near the end of each grade is important but not sufficient. Much concern centres around the fact that many students who are performing at below average and average reading levels could be supported to reach higher reading performance levels, yet many of them remain in the same reading performance group throughout primary and elementary school. Efforts to improve literacy levels must be concentrated in ongoing assessment and identification of those at risk of reading failure and in support strategies for all students to achieve to their full potential. We can no longer be content with status quo reading performance results. Steady improvement should be an ongoing goal.
3. Critical points for reading development throughout primary and elementary school signal the need for attention. In addition to ongoing assessment of children's reading at all grade levels, educators must pay particular attention to reading performance at these critical points. At the kindergarten and grade one levels, attention must be focused on reading performance to ensure the needs of students with reading difficulties are addressed before reading performance becomes fixed and thus more difficult to change. At the grade three level, it is extremely important to monitor student progress and to support reading difficulties as students at this grade level need well developed reading skills as they move from learning how to read to using reading skills to learn subject area content. Success in school from this point on largely depends on reading proficiency. Reading difficulties that persist in grade three often

result in failure in may subject areas. Many efforts to support reading skill deficits past grade three are often too late to be effective. Grade six, the end of elementary school, is another critical point in reading development. Students can, and often do, experience reading improvement or failure at the end of elementary school. To ensure that they receive support for reading problems and for reading enhancement before they make the transition to junior high school, we need to pay close attention to their reading development at this stage. Success in junior high school, with an even greater content area focus, will largely depend on a student's ability to read successfully. We must, therefore, ensure students are performing to their highest reading potential at each grade to further ensure their academic success.

4. In the primary school years, we must be responsive to the differences in the developmental progress of boys and girls in reading and other skill areas. Language-based approaches must also involve opportunities for students to use and develop other skill areas such as spatial development. However, while we are responsive to students' differing needs, it is equally important for us to refrain from setting up prior expectations for students such as not expecting girls to do as well as boys in mathematics and expecting that more boys than girls will experience reading difficulties. Expecting all students to achieve to their potential in reading, providing support for reading difficulties, and enhancing reading skill development will encourage students to achieve to expected levels. Schools and teachers must be

cognizant of this and must guard against meeting the needs of some students at the expense of others.

These suggestions would promote literacy improvement for students as they involve preventative measures, ongoing assessment, and intervention techniques. They are designed to monitor reading development at the beginning of school and continuously throughout the primary and elementary grades. A focused goal of improvement for all students will help to raise literacy levels in our province and improve our students' reading performance relative to students at the same grade levels in the rest of Canada.

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