Children Reading for Pleasure: Investigating Predictors of Reading Achievement and the Efficacy of a Paired-Reading Intervention to Foster Children's Literacy Skills

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Abstract

The amount of reading children do outside of school is positively related to their reading achievement. This relation is consistent and robust, but fails to consider additional factors that may be influential in predicting children's literacy performance. Moreover, this relation speaks to the use of reading programs to improve children's achievement by increasing reading frequency. Two studies were conducted to examine these issues. Study 1 proposed and tested a comprehensive model of children's literacy performance where the association between children's home literacy environment, reading motivation, and achievement was mediated by children's reading exposure. A sample ($N = 116$) of grade 3 and 5 children and their parents participated. Findings were in accord with the model; however, children's reading motivation was a significant and unique predictor of children's reading and spelling ability. Overall, the findings of Study 1 suggested that incorporating additional explanatory factors is necessary to children's literacy performance. Study 2 tested whether a summer reading program would improve achievement measures in a targeted sample ($N = 57$) of poor achievers from Study 1. Children were randomly assigned to a *Book Reading Group* or *Control Group.* Over 8-weeks children in the Book Reading Group were sent one book per week that was matched to their interest and reading level. In addition, parents acted as reading models and were trained to use skill-building strategies. As predicted, children in the *Book Reading Group* showed significant gains in reading compared to children in the *Control Group.* No group differences were found for oral language skills or reading motivation. Study 2 revealed that providing access to books and maximizing the role of parents was an effective method for improving poor achiever's literacy skills over the summer.

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"I love thee, I love but thee

With a love that shall not die

Till the sun grows cold,

And the stars grow old..."

–Bayard Taylor

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Children Reading for Pleasure: Investigating Predictors of Reading Achievement and Fostering Children's Literacy Skills

I. Introduction: Research Problem and Importance

Imagine what a difference it would make if all children loved to read. While certainly a pleasant thought it is not realistic as some children simply do not enjoy reading. This is a concern when considering the vast amount of research showing positive relations between amount of reading and various literacy related measures. Specifically, the amount of reading children do outside of school is consistently and positively related to reading achievement (Kim, 2004; Quirk & Schwanenflugel, 2004; Wigfield & Guthrie, 1997), vocabulary (Nagy & Anderson, 1984), and other verbal skills (Anderson, Wilson & Fielding, 1988; Cunningham & Stanovich, 1991; Greaney, 1980; Stanovich & Cunningham, 1992). In fact, differences in the amount of reading alone may be responsible for the discrepancy in skill levels between avid, frequent readers and apathetic, infrequent readers (Whitehurst & Lonigan, 2001).

Moving away from studying the stable relation between reading exposure and achievement, some researchers have investigated other facets of children's literacy development. Areas include, but are not limited to: (1) children's home literacy experiences and the role parents play in fostering reading skills; (2) children's intrinsic motivation to read; (3) children's reading self-concept; and, (4) children's attitudes towards reading. While each of these facets on their own has shown positive relations with children's amount of reading, a review of the extant literature revealed that these four specific facets are studied largely independently from one another. As a result, there remains little consensus as to the degree with which these facets: (1) are related to one

another; and, (2) if considered together, what would be their relation to children's achievement. Consequently, a main goal of the present research was to construct a testable model that would determine the relative influence of each facet on children's literacy performance and oral vocabulary skill after accounting for reading exposure.

In the area of children's reading frequency and performance, researchers have also expressed concern over the finding that extended breaks from school can negatively influence a child's achievement. Of particular interest is the effect of summer vacation on children's achievement. Researchers refer to the *summer slide* in which a typical child will lose a little more than one month of skill or knowledge in math and reading/language arts combined. Moreover, this effect is more pronounced for low-income children whose scores fall an additional three months behind their higher-income peers upon returning to school in the fall (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996). As a result, many programs have been created to curb the summer slide, but many take the form of summer remedial programs that are plagued by poor attendance rates, short duration, low academic expectations (Ascher, 1988; Heyns, 1978), teacher fatigue, and high cost (Borman & Dowling, 2006).

Alternatively, some researchers propose that simply providing access to resources and reading materials over the summer may be enough to facilitate and continue children's learning over the break from school. Indeed, this approach is promising as children have been shown to read more over the summer when supplied with books matched to their interest and reading level (Kim, 2006; Kim, 2007; Kim & Guryan, 2010; Kim & White, 2008). At present, however, such programs have simply provided access to materials and have had only minimal instructional components. In contrast to previous work, the present research designed and evaluated a summer book reading program that

provided access to books and utilized parents as reading models for their children. In addition, parents were trained to use easy and effective reading comprehension, vocabulary acquisition, and oral reading fluency strategies while they actively read with their child on a regular basis.

The present research is presented as two distinct studies. The first study was concerned with exploring facets related to children's literacy performance through development of a testable model. I begin with an overview of the benefits of reading for pleasure which then leads into the rationale and discussion for including each facet. Children's home literacy environment, intrinsic reading motivation, reading self-concept, and reading attitudes are all defined and critically evaluated based on the extant literature. Finally, the methodology, results, and discussion are presented for this component of the present research.

In the second study, a summer book reading intervention was designed and tested. The intervention aimed to improve children's reading comprehension, oral language skills, and reading motivation. This program provided children with access to books matched to their interest and reading level and also involved their parents. It was argued that increased parent involvement and the subsequent scaffolding that occurred while reading with their child resulted in greater treatment effects for children's outcome measures. Participant selection as well as a description of the intervention are included and are followed by the results and interim discussion. Finally, a general discussion and conclusions from both studies are found at the end of this document.

II. Study 1 Literature Review: An Introduction to Children's Reading Habits

A number of studies have investigated and catalogued various activities school aged children do outside of school hours, including the frequency and amount of reading

for pleasure (Greaney, 1980; Nippold, Duthie, & Larsen, 2005). From such studies, it is evident that the amount of reading for pleasure varies widely in child samples with both higher and lower levels of reading frequency being reported. For example, Coles and Hall (2002) reported that the amount of reading for pleasure reported by grade 5, 7, and 9 children had increased over the last two decades. When asked if they had read any book in the month prior to the survey, 91%, 81%, and 64% of grade 5, 7, and 9 children responded affirmatively. Moreover, examination of older children's reading for pleasure across 32 countries found that 72% of students said they read for enjoyment on a daily basis with 12% reading for more than one hour per day, 23% for 30 minutes to one hour, and 36% reading up to 30 minutes (OECD, 2002). Finally, samples of grade 5 children reported reading leisurely for at least one hour (Greaney, 1980) or up to 30 minutes on a daily basis (Anderson, Wilson, & Fielding, 1988).

Contrary to reports of increased reading amount, some researchers have highlighted a concerning trend showing that as children age their reported frequency of reading significantly decreases (Clark & Foster, 2005; Sainsbury & Schagen, 2004; Whitehead, Capey, Maddren, & Wellings, 1977). In an attempt to explain this finding, it has been posited that older children read less as a result of being afforded participation in a variety of other leisure activities that are more salient than reading for pleasure (Greaney, 1980). The saliency of other leisure activities is particularly evident in a sample of grade 6 and 9 children who reported enjoying listening to music (78%), watching television (77%), playing sports (68%), and playing video or computer games (63%) more than reading for pleasure (51%) (Nippold et al., 2005).

From these studies it is evident that children do report reading for pleasure, however, such research also highlights the considerable variability in the amount of reading being

done. In fact, it may be this variability in reading amount that accounts for individual differences in literacy performance. Consequently further examination of the benefits associated with reading for pleasure is warranted and is discussed next.

Benefits of Reading for Pleasure

Compared to spoken language, the written language found in books contains a greater variety of complex and novel words. Thus, reading books affords readers the opportunity to learn the meanings of new words, which in turn increases their word knowledge and subsequent reading comprehension (Nippold et al., 2005). Beyond exposure to new words, reading for pleasure benefits other child literacy-related areas including reading attitudes (McKenna & Kear, 1990), self-confidence as a reader (Guthrie & Alvermann, 1999), and overall literacy achievement (Anderson, Wilson & Fielding, 1988; McQuillan & Au, 2001; Taylor, Frye, & Maruyama, 1990). Specifically, the amount children read for pleasure has been shown to be positively linked to a number of achievement measures such as vocabulary, comprehension, spelling ability, and other verbal skills (Anderson et al. 1988; Braten, Lie, Andreassen & Olaussen, 1999; Cunningham & Stanovich, 1991; Sénéchal & LeFevre, 2002; Stanovich & Cunningham, 1992; Stanovich & West, 1989).

Perhaps due to vocabulary being a strong determinant of reading success in general (Biemiller, 2003; Joshi, 2005; Ouellette, 2006), many studies have specifically examined the link between print exposure and vocabulary skill. What these studies have shown is the unique predictive ability of print exposure in children's vocabulary skill after controlling for age, memory, and previous performance (Echols, West, Stanovich, & Zehr, 1996) as well as phonological coding and general ability (Cunningham & Stanovich, 1991). Further, in a summer learning study for grade 6 and 7 children, Heyns (1978) found that both the number of books and the time spent reading were both positively related to vocabulary after

controlling for prior achievement and family background. It is such findings that lend support to Stanovich's (1993) suggestion that one of the most powerful determinants of individual differences in vocabulary is print exposure.

Similarly, studies have found that print exposure is also a significant predictor of reading comprehension (Anderson, Wilson, & Fielding, 1988; Sénéchal, 2006) even after controlling for decoding skill (Cipielewski & Stanovich, 1992). Reading comprehension is a complex cognitive ability that requires readers to integrate text information with their own knowledge (Meneghetti, Carretti, & De Beni, 2006). With increased reading practice it is posited that individuals increase both their personal knowledge as well as cognitive strategies meant to foster aspects of reading comprehension.

In addition, print exposure has been shown to be a significant predictor of children's spelling ability even when age, general ability, phonological coding, and vocabulary are controlled (Cunningham & Stanovich, 1990; 1991). A student's ability to spell accurately reveals a sophisticated knowledge of letters and sounds represented by a developed ability in phonological processing. To this end, spelling has been linked to morphological, phonological, and orthographic knowledge (Wanzek, Vaughn, Wexler, Swanson, Edmonds, & Kim, 2006). Intuitively, spelling is related to reading and with increased exposure to the complex use of words, sentences, and language structures found in books spelling ability can be positively affected.

One may argue, however, that the above studies are constrained by the inherent nature of correlational data. Efforts were made to control for other related variables, but no causal statements as to the direction of the relation between print exposure and outcome measures can be confidently made. To this end, corroboration of such findings from longitudinal investigations is especially encouraging.

One study in particular corroborated past correlational findings. A two-year study conducted by Echols et al. (1996) found that print exposure significantly predicted grade 4, 5, and 6 children's vocabulary, general knowledge, verbal fluency, spelling ability, and reading comprehension after controlling for age, recognition memory, and previous performance in the same cognitive area. It seems then, based on past research that the link between reading amount and reading achievement is indeed a positive one albeit the directionality of such a relation is still unknown. Perhaps such relations are best explained by Stanovich's (1986) argument that reading amount and reading achievement are in a relationship of reciprocal causation. Simply put, skill development is accelerated through practice so the more a child reads, the better their achievement becomes and as their achievement and ability improves the more likely they are to read more frequently (Echols et al. 1996).

Arguably, Stanovich's above argument fails to account for *alliterate* children who have the ability to read, but simply choose not to (Hawkes, 2008). Reading can be an effortful activity for many children so it may not be sufficient to simply tell a child to read more. As a result, researchers have examined a number of additional factors both internal and external to the child that might influence children's reading for pleasure. A review of such factors follows.

Factors that Influence Reading for Pleasure

A child's decision to read for pleasure can be influenced by a number of factors. For example, external factors including receiving rewards or increased social interaction as well as internal factors including personal enjoyment or value gained from reading (Baker & Scher, 2002) all may positively influence a child to read more for fun. Consequently, the following sections will explore a selection of external and internal factors and discuss their facilitation of children's reading for pleasure. For the purpose of this research, children's

home literacy environment is classified as an external factor while children's intrinsic reading motivation, reading self-concept, and attitudes towards recreational reading are classified as internal factors.

External factor: children's home literacy environment. Parent involvement in children's reading takes on different roles depending on the age of the child. For instance, involvement in preschooler's reading often takes the form of shared storybook reading (Bus, van Ijzendoorn, & Pellegrini, 1995) where the parent actively reads books with their child. With older children, however, the dynamic shifts from being read to, to reading independently. When children become independent readers, parent involvement may take the form of asking questions about books, openly sharing and discussing books, and encouraging reading and praising their children's efforts.

Parent involvement in children's reading has been found to be positively associated with children's reading achievement, language comprehension, and expressive language skills (Gest, Freeman, Domitrovich & Welsh, 2004) as well as children's interest in reading, attitudes towards reading (Rowe, 1991), and overall interest in literacy (Ortiz, Stowe & Arnold, 2001).

Moreover, children who have more opportunities to engage in literacy activities at home have more positive views about reading, engage in more leisure reading, and have better reading achievement (Baker & Scher, 2002). In her study of the home environment and grade 5 children's leisure reading, Neuman (1986) found that higher SES parents encouraged their children to be more independent and actively involved in outside activities. These parents also were shown to read more and attempted to motivate their children, albeit indirectly, to also read more. In fact, the strongest association was between the frequency of leisure reading and a combined score for parent encouragement to read ($r = .53$, $N = 84$) that

included the availability of reading materials in the home, opportunity for reading, and how often they read to their child when they were younger. Interestingly, parents own reading habits did not seem to affect children's leisure reading to any degree ($r = .19$, $N = 84$) suggesting that parent encouragement and not merely modeling, influences children's leisure reading habits.

In addition to having an impact on reading frequency, parents can significantly affect their children's reading motivation. In a synthesis of 13 studies dating back to 1967 that examined parent involvement and student motivation in grades K-12, Gonzalez-DeHass, Willems and Doan Holbein (2005) concluded that parental involvement in the form of monitoring, enforcing, or helping with homework boosts students' perceived control and competence. They also concluded that parental involvement offers a sense of security and connectedness helping students to internalize academic values as well as increasing motivation. In addition, parents who endorse an entertainment approach to reading tended to provide more opportunities in the home for the children to acquire this perspective themselves compared to parents who endorsed a skills approach to reading (Baker, 2003). In fact, parental endorsement of pleasure for reading was associated with higher scores for reading motivation in the first grade (Baker & Scher, 2002).

Moreover, parents also influence their children's reading self-concept. In her study examining relations between parents own reading beliefs with their children's reader self-perceptions and reading achievement, Lynch (2002) found a significant positive relation between mothers' self efficacy and their child's self-concept as readers. This is to say that the more the mothers believed in their ability to help improve their child's reading achievement, the stronger children believed in their own reading ability (Lynch, 2002). Finally, parents can have a profound effect on their child's attitude

towards reading. Children from more supportive environments tend to display more positive attitudes towards reading and endorse the view that enjoyment is an important reason for reading (Rowe, 1991). In fact, Rowe (1991) found that attitudes towards reading and reading activity at home predicted both achievement and growth in reading attitude for children aged 5-14 years.

In sum, parents and the home literacy environment are essential in fostering children's love of reading. In fact, parental involvement has been shown to be a more powerful predictor of children's literacy practices than family background variables including social class, family size, and parent level of education (Flouri & Buchanan, 2004). In addition, parent involvement transcends time continuing to influence children's educational and literacy outcomes into teenage and adult years (Desforges & Abouchaar, 2003). Clearly, the impact of parents and the home literacy environment to children's literacy is important to consider when examining children's reading for pleasure. To this end, the present study also asked parents what activities or methods they use to motivate their child to read more for pleasure. This in itself is unique to the motivation field and is an attempt to better identify what parents are doing to actively engage and motivate their children to read more for pleasure. Moreover, additional factors posited to be influential in children's literacy performance, namely children's intrinsic reading motivation, reading self-concept, and attitudes towards reading were explored.

Internal motivational factors: Intrinsic reading motivation. Children's intrinsic reading motivation is a complex and multifaceted construct (Baker & Wigfield, 1999; Guthrie et al. 2007; Wigfield & Guthrie, 1997). This form of motivation is characterized by an individual's engagement in an activity that is based on personal interest for the activity itself (Ryan & Deci, 2000; Wigfield, Guthrie, Tonks, & Perencevich, 2004) where the reward

is in the participation of the activity (Baker, Scher & Mackler, 1997) and not for extrinsic reasons such as receiving recognition or grades (Wigfield & Guthrie, 1997). In early work, Deci (1975) posited that intrinsic motivation was based on an innate human need to be competent and self-determining in regards to the environment. Arguably, even though an individual may feel competent and efficacious in an activity they still may not choose to engage in it if they have no purpose or internal desire to do so. As a result, an important implication of children's intrinsic reading motivation is that if a child is intrinsically motivated to read purely for the enjoyment they get from reading, then their frequency of reading should be much higher than a child who is not intrinsically motivated (Wigfield & Guthrie, 1997).

Indeed, Cox and Guthrie (2001) supported this view in a study of grade 3 and grade 5 children, in which they found that intrinsic motivation was a significant predictor of reading for enjoyment in both grades over and above such factors as reading achievement and cognitive strategy use. From this, they concluded that the amount of reading for enjoyment is primarily determined by motivation. In another study, Wigfield and Guthrie (1997) found that children with higher intrinsic motivation were shown to read nearly three times as much outside of school compared to children with lower motivation, thereby supporting the theory that intrinsic motivation on its own is a significant predictor of children's reading behavior.

Research examining the relation between children's reading motivation and achievement is also positive. In their study, Taboada, Tonks, Wigfield, and Guthrie (2009) found that grade 4 children's intrinsic reading motivation, background knowledge, and cognitive strategy use made significant and independent contributions to children's reading comprehension. Moreover, intrinsic reading motivation directly predicted growth in reading comprehension over a 3-month testing period. In other studies, higher levels of intrinsic

motivation have been associated with higher achievement on comprehension tasks (Benware & Deci, 1984) and children's intrinsic motivation directly predicted text comprehension for grade 9 and 10 children (Guthrie, Wigfield, Metsala, & Cox, 1999).

The above findings are compelling, but many failed to control for extraneous variables and were limited in their examination of outcome measures. As a result, the relation of children's reading motivation to other literacy related outcome measures while controlling for potentially confounding variables is warranted. To this end, the current study examined the relations between children's intrinsic reading motivation and their reading ability, vocabulary, and spelling after controlling for specific home variables such as SES and parent literacy. In addition, children's arithmetic ability representing general academic ability was also controlled. Few studies have used such stringent control measures in the exploration of children's reading motivation and achievement. The exception is work done by Gottfried (1990) who conducted two studies examining academic intrinsic motivation in children aged 7 to 9. In both studies, children's reading achievement as measured by teacher ratings was predicted by motivation independent of IQ and SES. Contrary to the current research, however, Gottfried's work examined children's *academic* intrinsic motivation which is described as the enjoyment of school learning. The present study instead examined children's intrinsic reading motivation as it relates to activities outside of school.

Furthermore, researchers have attempted to operationalize children's intrinsic reading motivation to include multiple constituents that reflect internal characteristics. In one study, (Guthrie et al., 2007) three levels of intrinsic motivation were proposed that included: (1) curiosity; (2) preference for challenge; and (3) involvement. In a second study (Taboada, Tonks, Wigfield, & Guthrie, 2009), five levels representing *internal motivation for reading* were proposed and included: (1) perceived control; (2) interest; (3) self-efficacy; (4)

involvement; and (5) social collaboration. From this, it is evident that there is little consistency across studies when developing composite measures of children's intrinsic reading motivation. Due to this inconsistency, the current research study considered the inclusion of additional factors in children's intrinsic motivation to read including reading self-concept and attitudes towards reading, which are discussed next.

Internal motivational factors: Reading self-concept. The terms self-concept, self-perception, self-efficacy, and competency belief are very often used interchangeably to refer to an individual's own assessment of their ability to accomplish a task or activity (Wigfield et al. 2004). In the present study, the term reading self-concept was used to represent children's own perceptions of their reading ability. Such self-assessments are thought to form early in response to how well children master important academic skills as well as in response to their experiences of ease or difficulty with academic tasks (Chapman, Tunmer, & Prochnow, 2000).

Reading self-concept is generally considered to be a multidimensional construct as evidenced by Chapman and Tunmer's (1995) differentiation of three subcomponents. The first is *perception of competence,* which represents one's beliefs regarding their ability and proficiency in reading tasks. The second is *perception of difficulty* in reading which represents one's belief that reading activities are hard, and the third subcomponent is *attitudes towards reading* which represents one's feelings towards reading. Very often, however, reading self-concept has been studied as self-efficacy within the motivation literature and has been shown to be consistently related to persistence in reading (Baker & Scher, 2002; Chapman & Tunmer, 1995) as well as to motivational constructs including interest and intrinsic reading motivation (Wigfield & Guthrie, 1995). In fact, competence and efficacy beliefs are one of three categories in Wigfield's (1997) early

conceptualization of reading motivation and are also included in a recent definition of reading motivation by Taboada, Tonks, Wigfield, and Guthrie (2009). Hence, there is considerable overlap between research on reading self-concept and research on intrinsic reading motivation. As a result, reading self-concept is viewed to be a dimension conceptually suited for inclusion with other motivational constructs and internal factors influential in children's choice to read for pleasure, namely intrinsic motivation and attitudes towards reading.

An important implication of children's reading self-concept to reading for pleasure is that when children believe they are competent and efficacious readers they should be more likely to engage in reading (Wigfield & Guthrie, 1997). This is evidenced in Baker and Wigfield's (1999) study that revealed that children who believed they were capable of reading well and who were intrinsically motivated to read reported they read more frequently. Similarly, Chapman et al. (2000) found that even at an early age, children with positive self-concepts generally viewed themselves as being more competent in reading, having less difficulty with reading, and liking reading more than children who exhibited negative academic self-concepts. Moreover, children with negative self-concepts were found to read lower level books and perform at lower levels for word recognition and reading comprehension across the three years of the study compared to children with positive self-concepts.

A child's perception of their ability is important not only to their motivation to read for pleasure, but also to their overall ability to achieve in school. Research with grade 2, 3, and 4 children indicated that achievement and academic self-concept were reciprocally related such that achievement had an effect on self-concept, and academic self-concept had an effect on achievement (Guay, Marsh, & Boivín, 2003). Additional

research revealed that children who hold negative beliefs often do more poorly in school than what their actual abilities warrant (Pomerantz, Fei-Yin Ng, & Wang, 2006). Conversely, when a child perceives that they have the ability to accomplish a task they tend to perform at higher levels and have increased motivation to complete more challenging tasks (Eccles & Wigfield, 2002; Katzir, Lesaux, & Kim, 2009).

Correlational data certainly supports the positive relation between self-concept and reading achievement (e.g., Chapman et al. 2000; Katzir, Lesaux, & Kim, 2009; Ladd & Price, 1986) and longitudinal data has attempted to pinpoint the time with which reading self-concepts begin to exert a causal influence on children's performance. In their examination of younger elementary school children, Chapman and Tunmer (1997) found that performance in grade 2 significantly predicted reading self-concept one year later. Conversely, other studies have suggested that the relation between self-concept and performance begins later, somewhere between grades 3 and 5 (Helmke & van Aken, 1995; Kurtz-costes & Schneider, 1994). In fact, Chapman and Tunmer (1995) reported that children's perception of difficulty and competence were both significantly related to reading comprehension in grade 4 and perception of difficulty was even stronger in grade 5. These findings suggest that children's self-concepts as readers come in line with their achievement during the middle elementary school years. Consequently, the current study examined the relations between grade 3 and 5 children's reading self-concept and their reading ability, vocabulary, and spelling after controlling for specific home literacy variables such as SES and parent literacy.

Internal motivational factors: Attitudes towards reading. In 2004, Dungworth and colleagues reported the findings of a study in which they asked students why they liked reading and found that the most popular reason for reading was emotional and

related to the way reading made them feel. Not surprisingly, reading attitude reflects the affective component of reading self-concept that is typically accompanied by feelings and emotions that make reading more or less likely (Chapman & Tunmer, 1995; Kush & Watkins, 1996). According to McKenna, Kear, and Ellsworth (1995), the development of reading attitude occurs over time and is influenced by: (1) an individual's perception of the value of reading from a social context; (2) an individual's beliefs about the outcomes of reading (e.g., satisfying, frustrating, useful, or boring); and (3) specific reading experiences. Therefore, an important implication of children's attitude towards reading is that a child with a positive reading attitude should enjoy reading, should think reading is desirable, and because of such positive feelings towards reading should read more frequently (Baker, Scher, & Mackler, 1997; Guthrie & Wigfield, 1997).

Intuitively children's reading attitudes may influence the decision to read for pleasure with more positive attitudes paving the way to increased reading frequency, but literature supporting this prediction is scarce. Positive attitudes towards reading have been associated with sustained reading throughout the lifespan (Cullinan, 1987), but again no findings were reported on the relation between attitudes and the amount of reading done. Furthermore, Kush, Watkins, and Brookhart, (2005) reported that extracurricular reading behaviour was related to reading attitude and achievement for children in their early elementary school years (i.e. grade 2). Finally, Aarnoutse and van Leeuwe (1998) found that reading comprehension, reading pleasure, and reading frequency, measured later in life, could be predicted by earlier measures of the same variables. In each of these three studies, there was an indirect relation between children's reading attitudes and how much they read.

In contrast to the scarce literature on children's reading attitudes and reading frequency, a considerable number of empirical studies have reported consistent positive

relations between children's reading attitudes and achievement (Allen, Cipielewski, & Stanovich, 1992; Diamond & Onwuegbuzie, 2001; Kush et al., 2005; McKenna & Kear, 1990; Smith & Ryan, 1997). However, controversy surrounding the directionality of this relation is abundant. Some researchers argue that positive reading attitudes produce students with increased reading achievement (Bettelheim & Zelan, 1981), while others claim that the relation works in the opposite direction with achievement affecting attitudes (Johnson, 1981; Schofield, 1980). Clearly, additional research is needed to better delineate these relations.

Review of the extant literature revealed considerable overlap between reading self-concept and reading motivation, but this was not the case when examining attitudes towards reading. In fact, reading attitude is seldom a variable considered when researching children's reading motivation (Baker & Wigfield, 1999). Reading motivation constructs proposed by Wigfield (1997) included competence and efficacy beliefs, reading goals, and social purposes of reading. These constructs in turn, bear similarities to the reading attitude constructs proposed by McKenna et al. (1995) that included the value of reading from a social context, beliefs about the outcomes of reading, and specific reading experiences. In both, the role of social beliefs, personal beliefs, and reading experiences are all highlighted. Moreover, a more recent reading motivation construct presented by Taboada et al. (2009) included perceived control, interest, self efficacy, involvement, and social collaboration which at a theoretical level, overlap with the basic components of reading attitude. The assessment of these two constructs, however, is purely theoretical as no research has been done to directly evaluate the relations between the components for reading motivation and reading attitudes. Due to the overlap in component elements, it is posited that children's reading attitude is yet another

subcomponent to be included under the umbrella of constructs representing children's reading motivation.

As mentioned, in the extant literature the connection and examination of reading attitudes with other motivational constructs including children's intrinsic reading motivation and reading self-concept is lacking. Conceptually, these three constructs bear similarities to one another and as such should be examined together when investigating children's reading frequency and subsequent achievement. As a result, the current research attended to this gap in the literature by examining children's intrinsic reading motivation, reading self-concept, and attitudes as a global and internal representation of reading motivation. The current research posited that due to shared characteristics a composite measure of children's reading motivation comprised of these three constructs should be supported. Moreover, the present study included a greater number of outcome measures as well as a variety of controls to better evaluate whether the relation between reading motivation and outcomes is mediated by reading frequency. In addition, a secondary goal was to examine grade and gender differences across these constructs.

Grade and Gender Differences for Reading Frequency, Motivation, Self-concept, and Attitudes

Outside of school, children's reading habits in the form of frequency, motivation, self-concept, and attitudes all vary markedly according to grade and gender. Many studies report that as children age their reported frequency of reading significantly decreases (Clark & Foster, 2005; Sainsbury & Schagen, 2004; Whitehead, Capey, Maddren, & Wellings, 1977) and significant gender differences are apparent with girls typically exhibiting greater reading enjoyment and frequency than boys across all age

groups (Clark & Foster, 2005; Coles & Hall, 2002; Greaney, 1980; Merisuo-Storm, 2006; OECD, 2002).

In terms of intrinsic motivation to read, researchers have shown that younger elementary school children typically exhibit greater motivation to read than older children (Baker & Wigfield, 1999; Wigfield & Guthrie, 1997) and similar to findings for reading frequency, is marked by significant gender differences favoring girls (Baker & Wigfield, 1999; Wigfield & Guthrie, 1997). Similarly, past research findings revealed that children's reading self-concepts were more strongly associated with their performance with increasing grade level (Chapman & Tunmer, 1995). As a result, children at higher grade levels were more prone to displaying poor reading self-concepts compared to children in lower grade levels. Moreover, gender differences were also common such that female students typically exhibited higher self-concept as readers compared to male students (Gambell & Hunter, 1999).

Finally, grade and gender differences were also commonly reported when examining children's attitudes towards reading. Over time, there was evidence that children's reading attitudes became more negative with younger children exhibiting more positive attitudes towards reading than older children (Kush & Watkins, 1996; McKenna & Kear, 1990; Sainsbury & Schagen, 2004; McKenna et al. 1995). In their sample of 18,185 children, McKenna and Kear (1990) reported reading attitudes to be relatively positive in grade 1, but that by grade 6 they had become relatively indifferent. Additional studies have corroborated these findings (Kush & Watkins, 1996; Sainsbury & Schagen, 2004), but others with smaller sample sizes and alternate measures have not (e.g., Parker & Paradis, 1986; Wallbrown, Levine, Singleton, & Engin, 1981). In terms of gender differences, research consistently reports that girls tend to have more positive reading

attitudes than boys (Gambell & Hunter, 1999; Herbert & Stipek, 2005; Kush & Watkins, 1996; McKenna & Kear, 1990). This trend was evidenced in a study conducted by McKenna and colleagues (1995) who found that girls exhibited more positive attitudes than boys in grades 1 through 6 for both recreational and academic reading with the gap widening with age for recreational reading attitude. Similarly, Kush and Watkins (1996) found that girls had more consistent stability in their reading attitude than boys and over time had more positive feelings for recreational reading than boys.

As a result, the current research further investigated the presence of grade and gender differences for reading frequency, intrinsic motivation to read, reading self-concept, and attitudes towards reading. This research attempted to replicate past research findings with the expectation that: (1) younger children would report reading more than older children and girls would report reading more than boys; (2) younger children and girls would report greater intrinsic motivation to read compared to older children and boys respectively; (3) younger children and girls would report more positive reading self-concepts compared to older children and boys respectively; and, (4) younger children and girls would report more positive attitudes towards reading compared to older children and boys respectively.

III. Study 1: A Mediated Model of Children's Literacy Performance

Increased reading frequency is positively related to children's literacy related outcome measures, but simply telling a child to read more may not be entirely effective. In the present research, grade 3 and 5 children were recruited for two reasons: (1) they are more experienced readers which allows for better evaluation of higher order cognitive literacy skills that would otherwise just be emerging in novice readers; and, (2) having two grade levels allows for developmental comparisons across variables. In this research, factors

including children's home literacy environment, intrinsic reading motivation, reading self-concept, and attitudes towards reading were all examined. It was posited that such factors might influence a child's decision to read for pleasure and subsequently impact their reading achievement. To test this hypothesis, a mediated model of factors influencing children's literacy performance was proposed. The model included three factors: (1) reading exposure; (2) children's home literacy environment; and (3) reading motivation. It was posited that reading exposure should be directly related to children's literacy performance (i.e., reading ability, vocabulary, and spelling) whereas children's home literacy environment (parent literacy related activities with their child both in the past and present) and reading motivation (i.e., intrinsic motivation, reading self-concept, and attitudes towards reading) should hold an indirect relation to children's literacy performance. According to the model, the associations between children's home literacy environment and reading motivation to child outcomes are mediated by children's reading exposure (See Figure 1).

Building upon past research, the elaboration of the present model incorporated constructs typically not examined collectively including intrinsic motivation, reading self-concept, and reading attitudes. Examining them in this fashion provided a more comprehensive investigation of the interrelations among children's reading exposure, home literacy environment, reading motivation, and achievement. In addition, this model utilized multiple measures within each construct to strengthen the validity of the proposed model and also incorporated multiple control variables.

Finally, consistent findings in the literature reveal grade and gender differences for reading frequency, intrinsic reading motivation, reading self-concept, and attitudes towards reading. As a result, a secondary goal of the present research was to further explore potential grade and gender differences in this sample of grade 3 and 5 children for all measures.

Method

Participants

Children in grades 3 and 5 and one of their parents participated in this study. All children were recruited from six elementary schools in a northern Canadian city. A total of 116 children that included 60 grade 3 and 56 grade 5 students with a mean age of 9 years 6 months (*SD* = 12.6 months) participated. The grade 3 sample included 29 girls and 31 boys with a mean age of 8 years 6 months (*SD* = 4.5 months) and the grade 5 sample included 30 girls and 26 boys with a mean age of 10 years 6 months (*SD* = 4.7 months). Children included spoke English most often according to parent reports, with 98% of children speaking English most often. Moreover, 75% of parents reported speaking English exclusively at home, 3% speaking French exclusively, and the remaining 22% reported differing levels of bilingualism in the home.

The parent with the most knowledge of the child's literacy habits was asked to complete a questionnaire. In 88% of cases the respondent was the mother, 11% the father, and in one case the respondent was the child's grandmother. The respondents were asked to indicate their highest level of education. On average, 6% of parents had not completed high school, 15% completed high school only, 48% completed some college, and 29% completed some university. Thus, 77% of parents reported completing some form of postsecondary education, and that is higher than the national average of 62% for Canadians (Statistics Canada, 2001). Parents also reported their average annual household income. On average, 7% reported earning less than $20,000 per year, 11% between $20,001 and $40,000, 8% between $40,001 and $60,000, 24% between $60,001 and $80,000, and 50% reported earning more than $80, 000 per year.

Materials: Parent Measures

Questionnaire about children's home literacy environment and reading activity. Children's home literacy environment, reading activity, and reading behavior were measured using a parent questionnaire (see Appendix A). Parents were asked to indicate at what age they started reading storybooks to their child and on a 5-point scale indicate the frequency of shared reading prior to grade 1 (0 = Never, 4 = Very Often). Parents were also asked to estimate using a 7-point scale the number of English children's books available in the home (0 = no books, 6 = more than 101) as well as estimate on a 5-point scale (0 = never; 4 = very often) the frequency of library visits with their child and how many children's books they typically borrow at each library visit. Parents were also asked to estimate the number of hours their child spends reading for pleasure, watching television, and playing on the computer in a typical day (0 = zero hours, 4 = more than 6 hours).

Parents were also asked if they do anything to motivate their child to read for pleasure (Yes/No). An open-ended question asked parents who responded "Yes" to elaborate by giving examples of the types of things they do to motivate their child to read for pleasure. From the answers provided, two variables were constructed: (1) total score of motivational methods used; and (2) types of motivational methods used. The total score was constructed by summing the number of different motivational methods stated in the parent response. The second variable, types of motivational methods used, was created by coding parent responses according to five dimensions: (1) Supplying reading materials; (2) Reading as part of a reward system; (3) Reading through interactions with others; (4) Parents as a reading model for their children; and (5) Children's reading autonomy.

Checklist for parent print exposure. Parents completed a checklist to measure their own exposure to adult literature, which was later used as a control measure for child performance outcomes. The Adult Author Checklist (AAC) was used to assess parents' familiarity and recognition of adult authors (Sénéchal, LeFevre, Hudson, & Lawson, 1996) and was a reliable print exposure measure ($\alpha = .94$) resistant to social desirability typically found with other survey or questionnaire forms (Cunningham & Stanovich, 1991). The checklist was comprised of a total of 60 author names of which 40 were true answers and 20 were foils. Parents were instructed to select only authors they recognized and to refrain from guessing. As a check for guessing, the number of incorrectly identified authors was examined (*Median* = 0.00) and revealed that parents followed the instructions to refrain from guessing. A corrected score was obtained by subtracting the proportion of foils wrongly selected from the proportion of correctly identified items (See Appendix B).

Materials: Child Predictor Measures

A total of seven child measures were used to predict child outcomes. Predictor variables included: (1) two proxy measures of print exposure, (2) reading frequency questions; (3) a total of three self-report scales that assessed intrinsic reading motivation, reading self-concept, and attitudes towards recreational reading; and, (4) a math assessment that was used as a control variable. Description of each predictor measure follows.

Child book author and book title checklists. Children's own exposure to books was measured using two checklists with one measuring knowledge of book authors and the second measuring knowledge of book titles. The underlying logic of these checklists is that a frequent reader should recognize more authors and titles than an infrequent

reader. The Children's Book Author Checklist (CBA) was a reliable measure ($\alpha = .93$) used to assess children's familiarity with child storybook authors. The CBA was adapted from a similar checklist developed by Cipielewski et al. (1992) to include updated and popular child book authors. In the present study, three librarians and two bookstore employees specializing in children's literature provided suggestions of current popular children's authors which resulted in the addition of 15 new authors to 10 of the original authors from the Cipielewski et al. checklist. The 10 original authors were retained based on recognition percentages in excess of 20% (Cipielewski et al., 1992) and the 15 foils used in the original checklist were also retained for use in this updated version. Children were instructed to select only authors they recognized and to refrain from guessing as some names were not real (25 true answers and 15 foils). As a check for guessing, the number of incorrectly identified authors was examined (*Median* = 1.00) and revealed that children generally followed the instructions to refrain from guessing. A corrected score was obtained by subtracting the proportion of foils wrongly selected from the proportion of correctly identified items.

A second checklist called the Children's Book Title Checklist (CBT) was used to assess children's familiarity with popular children's books. The CBT was adapted from a checklist developed by Cipielewski et al. (1992) to include updated and popular child book titles and was a reliable measure ($\alpha = .91$). From Cipielewski et al's original version, 17 book titles were retained based on recognition percentages in excess of 34% as well as the inclusion of 15 foils. An additional eight new book titles were added to the checklist based on recommendations made by the same three librarians and two bookstore employees who recommended child authors for the CBA. A limitation was in place that

only new book titles that had not been made into a movie could be included. Children were instructed to select only titles they recognized and to refrain from guessing as some titles were not real books (25 true answers and 15 foils). As a check for guessing, the number of incorrectly identified book titles was examined (*Median* = 5.00) and revealed that children guessed substantially more when selecting book titles than when selecting authors. A corrected score was obtained by subtracting the proportion of foils wrongly selected from the proportion of correctly identified items. See Appendix C & D for the CBA and CBT respectively.

Frequency of reading for pleasure. The frequency of children's pleasure reading at bedtime and at other times was measured using a self-report questionnaire. Children were asked to estimate using an 8-point scale (0 = Never, 7 = 7 times per week) how often they read for fun at bedtime and how often they read for fun at other times during the week. See Appendix E.

Intrinsic motivation. Children's intrinsic reading motivation was assessed using a modified version of the Motivations for Reading Questionnaire (MRQ; Wigfield & Guthrie, 1997). The proposed intrinsic reading motivation composite follows from other researchers who also typically use this same modified version (e.g., Cox & Guthrie, 2001; Guthrie, Wigfield, Metsala, & Cox, 1999) when examining children's intrinsic reading motivation. The first subscale, *challenge,* is comprised of five items and includes statements such as; I like hard, challenging books. The second subscale, *curiosity*, is comprised of six items and includes statements such as; I like to read about new things. Finally, the third subscale, *reading involvement*, is comprised of six items and includes statements such as; I feel like I make friends with people in good books. Using a 4-point scale (1 = very different from me, 4 = a lot like me), children were instructed to circle the number that best represented their

feelings for the statement given by the examiner. A total intrinsic reading motivation score was calculated by adding all the child's responses for each subscale (max score=68). Higher scores represent greater intrinsic reading motivation. The specific items for each subscale are found Appendix F.

Reading self-concept. Children's reading self-concept was measured using the Reading Self-Concept Scale (RSCS; Chapman & Tunmer, 1992), which has a reported internal consistency of 0.80 and higher for each subscale. The RSCS is a 30-item rating scale aimed at measuring the reading sub-component of academic self-concept specifically, the perceptions of competence and difficulty in reading as well as the attitudes towards reading. For the purpose of this study, the *Competence* subscale, made up of 10 items, was administered as a measure of children's perception of reading competence. Using a 5-point scale (1 = No: never, 5 = Yes: always), children were instructed to circle the number that best represented their feelings for statements given by the examiner such as, Can you work out hard words by yourself when you read? Refer to Appendix G for the item list. Each response was scored from 1 (low reading self-concept) to 5 (high reading self-concept) for a maximum score of 50.

Attitude towards reading. Children's attitude towards reading was assessed using the Elementary Reading Attitude Survey (ERAS; McKenna & Kear, 1990). The ERAS is a 20-item, 4-point, pictorial rating scale based on the cartoon character Garfield. It is comprised of two 10-item subscales for recreational and academic (school-related) reading attitude. For the purpose of the current study, only the 10-item recreational subscale of the ERAS was used as children's attitudes towards recreational reading was the objective for this research. This subscale is reliable as evidenced by internal consistency values of .80 and .86 for grades 3 and 5 respectively. Each item presents a

brief, simply worded statement about reading (e.g., how do you feel about getting a book for a present?) followed by four black-lined pictures of Garfield ranging from very happy to very upset. The "Very Happy" Garfield is shown with his arms in the air, eyes wide, with a big toothy smile. The "Happy" Garfield is shown with his arms crossed, eyes wide and a smile. The "Upset" Garfield is shown with his arms crossed, but with narrowed eyes and a frown on his face. Finally, the "Very Upset" Garfield is shown charging across the page with fists clenched at his sides and a scowl on his face. Children were instructed to circle the Garfield who best showed how they felt about each statement spoken by the examiner. Each response was assigned between 1 and 4 points, from most negative to most positive respectively with a maximum possible score of 40. See Appendix H for item list.

Math achievement. Children's arithmetic ability was assessed using the Math Computation Subtest found in the Wide Range Achievement Test-4 (WRAT-4; Wilkinson & Robertson). This subtest is a reliable and standardized measure that reports a mean split-half reliability of .89 and includes a total of 40 items that get progressively more difficult. Children are asked to complete as many mathematical problems as possible in 15 minutes and one point is awarded for each correct answer. This measure was used as a control for general achievement and standardized scores were used in the analyses.

Materials: Child Outcome Measures

A total of five standardized child outcome measures were assessed including two measures of reading ability, two measures of vocabulary, and one measure of spelling ability. Each measure is described in turn below.

Reading ability. Children's reading ability was assessed using the *Passage Comprehension* and *Word Identification* subscales of the Woodcock Reading Mastery Tests-Revised (WRMT-R; Woodcock, 1998). The Passage Comprehension subtest is a reliable and standardized measure that includes a total of 68 items and reports a mean split-half reliability of .92 and .73 for grade 3 and grade 5 students respectively. Children are asked to silently read a short passage and identify a key word missing from it. Testing was stopped when the six highest-numbered consecutive test items were failed and one point was given for each correct answer. The Word Identification Subtest is also a reliable and standardized measure that includes a total of 106 items and reports a mean split-half reliability of .97 and .91 for grade 3 and grade 5 students respectively. Children were asked to read aloud isolated words from a list of items that get progressively more difficult. Testing was stopped when the six highest-numbered consecutive test items were failed and one point was given for each correct answer. Standardized scores for both subtests were used in the analyses.

Expressive vocabulary. Children's expressive vocabulary was assessed using the Expressive Vocabulary Test (EVT; Williams, 1997). The EVT is a reliable and standardized measure that reports a mean split-half reliability of .91 and includes a total of 190 test items. The first 38 items are labeling items where the experimenter points to a picture or a part of the body and asks the child to name the picture or body part. The remaining 152 items are synonym items where the examiner presents a picture and a word and asks the child to give a synonym to the given word. One point was given for each correct answer and standardized scores on the EVT were used in the analyses.

Receptive vocabulary. Children's receptive vocabulary was assessed using the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997). The PPVT-III

is a reliable and standardized measure that reports a mean split-half reliability of .94 and includes a total of 350 items. From a plate of four picture choices, children were asked to point to the picture that best matched the word spoken by the examiner. One point was given for each correct answer and testing stopped after the child got eight answers wrong from a set of 12. Standardized scores on the PPVT-III were used in the analyses.

Spelling. Children's spelling ability was assessed using the Wide Range Achievement Test-4 that reports a median reliability coefficient ranging from .87 to .93 for its four subtests (WRAT-4; Wilkinson & Robertson). The Spelling subtest includes a total of 42 items. Children were asked to spell a word spoken by the examiner by writing it in their response booklet. Adhering to the 5/10 rule, the child must first correctly spell five consecutive words and administration was stopped when the child incorrectly spelled ten consecutive words. One point was given for each correctly spelled word and standard scores were used in the analyses. Children's spelling ability was assessed due to its positive relation with literacy skills (Echols et al. 1996).

Procedure

For each participating child, the parent who was most familiar with the child's reading activities completed the questionnaire and Adult Author Checklist (AAC). Child testing was conducted over two testing sessions that were less than one week apart, with each lasting approximately 30 minutes. The first testing session consisted of group administered measures that were administered in the following order: the two checklists, intrinsic reading motivation, reading self-concept, and reading attitude surveys, the frequency of reading for pleasure questionnaire, and the spelling and arithmetic subscales of the WRAT-4. For each of these measures each item was read aloud by the examiner. This was done to ensure that answers would not be influenced in any way by the child's

reading ability. The second session consisted of individually administered measures that were administered in the following order: receptive vocabulary, passage comprehension, word identification, and expressive vocabulary.

Results

Missing data points were replaced with the sample mean for the appropriate variable because the missing data were randomly distributed across variables and never exceeded 10% for any given variable. Furthermore, contrary to expectation, no differences across grade or gender for any standardized or questionnaire measures were found. Refer to Appendix I for Tables I1 and I2 that report descriptive statistics for: (1) outcome measures across grade and gender; and (2) questionnaire measures across grade and gender. As a result, all subsequent analyses were conducted using the entire sample of 116 children.

Descriptive Statistics

The descriptive results for children's achievement measures are reported in Table 1. Children performed at or near the expected standardized means for each achievement measure and reported moderate levels of intrinsic motivation and relatively positive reading self-concepts and attitudes towards reading for pleasure.

In Table 2, children's reading habits and experiences are reported. Children reported reading for fun at bedtime and at other times on average four times during a typical week. Parents reported owning between 81 and 100 children's books and also reported that their children read for pleasure three to four hours each week and watched television and used the computer between one and two hours each day. In addition, parents reported that their child goes to the library sometimes and borrows on average three books per visit. Parents also reported initiating shared reading with their child

between seven months and one year of age and that the frequency of shared reading occurred often before grade 1.

The percentage of correctly identified book titles and book authors are also found in Table 2. On average, children correctly recognized 32% of child book titles and 29% of child book authors. As a measure of guessing, the selection rate of foils for each checklist was examined. On average children selected 3.37 (*SD* = 3.75) foils from the child book title checklist and 2.21 (*SD* = 3.27) foils from the child book author checklist. Parent recognition of adult book authors was shown to be stable with an average of 34% correct recognition of real authors and parents seldom selected foils (M = 0.31, *SD* = 1.00). In all subsequent analyses, scores on the checklists were adjusted for guessing by subtracting the proportion of foils selected from the proportion of correct items selected.

Finally, parents were asked whether they motivate their child to read for pleasure (see Table 2). On average, 77% of parents reported motivating their children to read using on average 1.51 (*SD* = 1.27) different types of motivational methods. Specifically, 52% of these parents reported motivating their child by supplying a wide variety of reading materials through the purchase of books and magazine subscriptions and taking their child to bookstores and libraries. Another 34% reported an interaction approach where they encourage their child to read to/with the family, to talk about books, and to play reading games while 24% of motivating parents project themselves as a reading model who encourages their child to read suggesting that reading is a fun activity with many benefits. Moreover, 14% of parents reported using books as part of a reward system, while only 7% of parents encouraged their child's reading autonomy by allowing them to select their own books when at book stores or libraries. From this, it was

apparent that parents use many different motivational techniques to encourage their children to read for pleasure.

Data Reduction

Composite measures were created for two outcome constructs, three predictor constructs, and one control construct. The purpose of creating the composite scores was to reduce the number of variables associated with child, parent, and control measures. Refer to Appendix J for Tables J1 through J6 that report zero-order correlations among variables for each composite measure. First, composite measures for children's reading ability and oral language skills were computed. Children's reading ability was constructed using an average of the standard scores for children's passage comprehension and word identification subtests. This was done as both subtests are used to assess reading and also showed a strong positive correlation with one another (r = .76). Similarly, children's oral language skill was constructed using an average of the standard scores for children's receptive and expressive vocabulary. This was done due to the inherent goal of each subtest to test vocabulary as well as a strong positive correlation with one another (r = .64).

Second, composite measures for children's reading exposure, home literacy environment, and reading motivation were created. Children's reading exposure included parent and child reports of children's reading frequency, and children's print exposure measured by the book author and title checklists. These variables were chosen for their obvious relation to children's reading exposure and exhibited intercorrelations that ranged from .15 to .49. This construct was computed by calculating an average of the standardized scores for these measures.

Next, children's home literacy environment was comprised of variables chosen to measure how parents provide a literate home environment for their children. Variables included the age onset of shared reading, the frequency of shared reading prior to grade 1, the number of children's books in the home, and whether parents reported motivating their child to read for pleasure. Intercorrelations ranged from .11 to .50 and this construct was computed by calculating an average of the standardized scores for these variables.

Next, children's reading motivation included scores on three subscales taken from three different surveys that assess intrinsic reading motivation, reading self-concept, and reading attitudes. Due to the different scales used as well as the seemingly different constructs represented by each survey, a principal components factor analysis was conducted. Bartlett's Test of sphericity was conducted to determine the factorability of variables for the proposed analysis. Values for the potential analysis were significant ($p < .001$) indicating that the measures were amenable to factoring. Moreover, robust factor loadings ranging from .71 to .86 indicated that these three variables do share commonality. Thus when taken together, children's intrinsic motivation, reading self-concept, and reading attitudes represent a comprehensive reading motivation construct as predicted. Refer to Table 3 for factor loadings.

Finally, participant socioeconomic status included parent education level, annual household income, and adult print exposure measured by the Adult Author Checklist. Intercorrelations among these variables ranged from .26 to .48 and this construct was computed by calculating an average of the standardized scores for these variables. Composite scores were used in all subsequent analyses.

Correlations

Zero-order correlations as well as partial correlations controlling for grade were conducted. The interrelations among children's reading exposure, home literacy environment, reading motivation, literacy and oral language measures were examined and are presented in Table 4. Most of the relations among variables were moderately to strongly associated with each other (*p*s = 0.01) with coefficients ranging from .14 to .76. Specifically, after controlling for children's grade level, key predictor variables including reading exposure, home literacy environment, and reading motivation were all significantly and positively related to one another with values ranging from .28 to .46. Furthermore, these same predictor variables were significantly and positively related to child outcome measures that included reading ability, vocabulary, and spelling with values ranging from .24 to .55. Examination of control measures revealed that children's math achievement was significantly and positively related to all other variables with values ranging from .21 to .59. Children's SES on the other hand, was shown not to be significantly related to children's reading motivation or spelling, but was positively and significantly related to all other variables with values ranging from .28 to .46.

Testing the Mediated Model of Children's Literacy Performance

The proposed mediated model of children's literacy performance posits that reading exposure should be directly related to children's literacy performance (i.e., vocabulary, spelling, and reading ability) whereas children's home literacy environment and reading motivation should hold an indirect relation to child outcomes. According to the model, the associations between children's home literacy environment and reading motivation to child outcomes are mediated by children's reading exposure. See Figure 1 for the proposed model.

A *mediator* is a variable that explains the relation between a predictor variable and outcome variable (Frazier, Tix, & Baron, 2004; Baron & Kenny, 1986). Traditionally, testing for mediator effects is done using Baron and Kenny's (1986) *Causal Steps Approach*. To establish a mediation effect, four conditions or "steps" must be supported, (1) the independent variable (IV) must be significantly related to the dependent variable (DV); (2) the IV must be significantly related to the mediator; (3) the mediator must be significantly related to the DV while controlling for the IV; and (4) the strength of the relation between the IV and DV is reduced once the mediator is entered into the equation. Complete mediation is said to exist if the relation between the IV and DV is rendered statistically non-significant. In contrast, a partial mediation effect is said to be present if the magnitude of the relation between the IV and DV decreases, but still remains significant. Although the *Causal Steps Approach* has been traditionally used to determine the presence of mediation effects, it has been criticized for lacking power, having a tendency to generate Type I errors, and for not directly assessing mediation effects (Frazier, Tix, & Barron, 2004). As a result, an additional analysis in the form of Bootstrapping is recommended for sample sizes under 400. Bootstrapping is a non-parametric approach for effect-size estimation and hypothesis testing. Essentially, a large number of sample sizes from the original sample are taken using sampling with replacement to calculate the indirect effect of the pathway from predictor to mediator to outcome. The average is then taken from each sample run in the sampling with replacement procedure and confidence intervals not containing zero indicate evidence of a mediation effect. Therefore to test the proposed mediated model of children's literacy performance in the current study, analyses in the form of Causal Steps and Bootstrapping were conducted and supported.

In the current study, support for the Causal Steps Approach was found. Steps 1 and 2 were both supported as evidenced by significant positive correlations shown in Table 4. The significant and positive relations between home literacy environment, reading motivation (IV's) and reading ability, vocabulary, and spelling ability (DV's) supported Step 1. Furthermore, significant and positive relations between home literacy environment, reading motivation (IV's) and reading exposure (Mediator) supported Step 2.

To test for support of Steps 3 and 4 of the Causal Steps Approach, a series of fixed-order hierarchical regression analyses were conducted. First, the mediating role of children's reading exposure was examined for two separate investigations: (1) the relation between children's home literacy environment and outcome measures; and (2) the relation between children's reading motivation and outcome measures. Second, the relation between children's reading exposure and outcome measures was examined. For each investigation, two models were tested: the first tested whether children's home literacy environment/reading motivation explained a significant portion of variance in child outcomes whereas the second model tested whether the association found would still hold when children's reading exposure was entered first in the equation. All models presented in Tables 5, 6, and 7 accounted for a statistically significant amount of variance ($p < .05$). Each regression model was structured to test the relations among constructs after controlling for children's socioeconomic status, grade level, and children's general academic performance (i.e., math achievement).

Relation of children's home literacy environment to outcome measures. It was predicted that children's reading exposure would mediate the relation between children's home literacy environment and outcome measures that included reading, vocabulary, and

spelling ability. First, the relation between children's home literacy environment and reading ability was examined. As shown in Model 1 of Table 5, children's home literacy environment was found to be a significant predictor of children's reading ability explaining a significant 4% of variance after controlling for SES, grade level, and math ability. When entered last in the equation and controlling for children's reading exposure, however, children's home literacy environment became non-significant explaining just 0.6% of the variance. In support of the mediated model proposed, children's reading exposure explained a unique 18% of the variance. When entered last into this equation, children's reading exposure was: (1) significantly related to children's reading ability; and (2) significantly decreased the strength of the relation between children's home literacy environment and reading ability. As a result, Steps 3 and 4 of the Causal Steps Approach were satisfied indicating that reading exposure was a significant mediator in the relation between children's home literacy environment and reading ability. In addition, the Bootstrapping approach also yielded a significant effect with 99% confidence interval values ranging from 0.08 to 0.34. Thus, these two tests for mediation converged to show that children's reading exposure was a significant and complete mediator in the relation between children's home literacy environment and reading ability.

Second, the relation between children's home literacy environment and vocabulary was examined. When entered after controls, but before reading exposure, children's home literacy environment explained a near significant 2% of variance (p = .06) in children's vocabulary skill while reading exposure explained 7% unique variance. However, after controlling for SES, grade level, math ability, and reading exposure as shown in Model 2 of Table 5, children's home literacy environment was no longer a significant predictor of vocabulary skill explaining just 0.4% of the variance while

reading exposure explained 9% unique variance. Having satisfied the Causal Steps Approach for mediation, a Bootstrapping approach with 99% confidence interval values ranging from .07 to .32 further corroborated the finding that reading exposure was a significant and complete mediator in the relation between children's home literacy environment and vocabulary skill.

Finally, the relation between children's home literacy environment and spelling ability was examined. When entered after controls, but before reading exposure, children's home literacy environment explained a significant 4% of variance while reading exposure explained 12% unique variance. Similar to findings for reading ability and vocabulary, when children's home literacy environment was entered last in the equation it became non-significant explaining just 0.9% of the variance while reading exposure explained a unique 15% of the variance. The conclusion that reading exposure was a significant mediator in this relation was further corroborated by a Bootstrapping approach with 99% confidence interval values ranging from 1.16 to 4.57.

In sum, children's home literacy environment was shown to be a significant predictor of children's reading, vocabulary, and spelling ability, but as predicted each of these relations was completely mediated by children's reading exposure.

Relation of children's reading motivation to outcome measures. It was predicted that children's reading exposure would mediate the relation between children's reading motivation and outcome measures that included reading, vocabulary, and spelling ability. First, the relation between children's reading motivation and reading ability was examined. As shown in Model 1 of Table 6, both reading motivation and reading exposure were found to be significant predictors of reading ability. When entered after controls, reading motivation explained 10% of the variance and reading exposure 11%

unique variance. After controlling for children's reading exposure, reading motivation continued to be a unique predictor of reading ability accounting for 3% unique variance over and above 18% variance accounted for by reading exposure. The decreased strength of the relation between children's reading motivation and reading ability after accounting for children's reading exposure, however, supports mediation as outlined in Step 4 of the Causal Steps approach. Similarly, a Bootstrapping approach with 99% confidence interval values ranging from .08 to .32 supported the finding that children's reading exposure was a significant, but partial mediator in this relation.

Second, the relation between children's reading motivation and vocabulary was examined. Contrary to expectation, children's reading motivation was not a significant predictor of children's vocabulary skill after controlling for SES, grade level, and general academic ability as shown in Model 1 of Table 6.

Finally, the relation between children's reading motivation and spelling ability was examined. As shown in Model 1 of Table 6, both reading motivation and reading exposure were found to be significant predictors of spelling ability. When reading motivation was entered after controls it explained 11% of variance in spelling skills while children's reading exposure accounted for 8% unique variance. When entered last in the model following SES, grade level, math ability, and reading exposure, children's reading motivation continued to be a unique predictor of spelling ability accounting for 4% unique variance over and above the 15% variance accounted for by reading exposure. This decrease in strength was evidence of a mediated effect and was further corroborated by a Bootstrapping approach that yielded a significant effect with 99% confidence interval values ranging from 0.93 to 4.20. Similar to findings for reading ability,

children's reading exposure was a partial mediator in the relation between children's reading motivation and spelling skills.

In sum, children's reading motivation was shown to be a significant predictor of reading achievement and spelling measures only. These relations were only partially mediated by children's reading exposure showing that children's reading motivation was a significant and unique predictor of children's reading ability and spelling after accounting for controls and children's reading exposure.

Relation of children's reading exposure to outcome measures. As predicted, children's reading exposure was directly and uniquely predictive of all child outcomes (see Table 7). When entered last in the regression model after children's home literacy environment and reading motivation, children's reading exposure uniquely and significantly predicted 10% reading ability, 8% of vocabulary skill, and 7% spelling skill. As a result, such findings support the proposed model that posited that children's reading exposure was a complete mediator in the relations between children's home literacy environment and outcome measures. Contrary to expectation, reading exposure was a partial mediator in the relation between children's reading motivation and their outcome skills.

Role of control measures in the hierarchical regression analyses. In each of the hierarchical regression analyses forced entry of three control measures including: (1) SES; (2) child grade level; and (3) children's general academic ability (i.e., math achievement) occurred first in the equation. This was done in order to build and support a highly stringent model of children's literacy performance. Examination of the beta weights in Tables 5, 6, and 7 revealed three patterns of findings. First, SES was a significant and unique predictor of children's vocabulary skills explaining approximately

21% of the variance. Second, child grade level was a significant and unique predictor of children's reading ability explaining 10% of the variance. Third and most noteworthy, was the finding that children's math ability was a significant and unique predictor of all outcome measures. This variable represented children's general academic achievement and explained 16, 20, and 26% of variance for vocabulary, spelling, and reading ability respectively. Consequently, the use of these control measures in the analyses served to create a highly stringent model of children's literacy performance.

Interim Discussion

The present study tested a model to explain individual difference in children's language and literacy. The present model included three key constructs: reading exposure, home literacy environment, and child reading motivation. According to the model, the association between children's home literacy environment and reading motivation and child outcomes is mediated through children's reading exposure. The main objective of the current study was to test the validity and accuracy of this proposed model. A second objective was to examine predicted grade and gender differences for children's reading exposure, intrinsic reading motivation, reading self-concept, and attitudes towards reading. The findings for each of these goals are discussed in turn.

The first objective of the current study was to test the validity of the proposed model. As predicted, all constructs included in the model were moderately to strongly related to child outcomes. The first pathway in the model was between children's reading exposure and outcome measures including reading ability, spelling, and vocabulary. As expected, complete support for the hypothesis that reading exposure was uniquely predictive of all child outcome measures was found. That is, reading exposure explained unique variance in literacy and vocabulary when entered last in very stringent regression

analyses. These analyses controlled for SES, grade level, general academic ability, home literacy experiences, and reading motivation. The findings are in accord with other research (Guthrie et al., 1999) that shows positive relations between the amount children read and their reading achievement. Specifically, the amount of reading children do has been shown to be positively linked to a number of achievement measures including reading comprehension, spelling ability, and vocabulary (Anderson et al. 1988; Braten, Lie, Andreassen & Olaussen, 1999; Cunningham & Stanovich, 1991; 1992; Sénéchal & LeFevre, 2002; Stanovich & Cunningham, 1992; Stanovich & West, 1989).

The relation between reading exposure and child outcomes is best understood when one considers the inherent structure of books. For instance, the written language found in books contains a greater variety of complex and novel words. In fact, Hayes and Ahrens (1988) found that children's books contain 50% more rare words compared to television or college students' conversations. Thus, reading books provides children with the opportunity to learn the meanings of new words (Nippold et al., 2005). In addition, when reading, children are presented with orthographic patterns necessary for developing greater reading ability and subsequent spelling skills (Cunningham & Stanovich, 1991). Therefore, the present findings are in accord with the view that print exposure may be enough to significantly facilitate reading, spelling, and vocabulary. These correlational findings are in accord with intervention research that found that children in grades 3, 5, and 7 made reliable gains in vocabulary from reading texts (Nagy, Anderson, & Herman, 1987).

The second hypothesis of the model was that reading exposure mediated the relation between children's home literacy environment and child outcomes. The findings were as expected: the relation between children's home literacy environment and all

outcomes was completely mediated by children's reading exposure. It is nonetheless important to consider that children's home literacy environment significantly predicted all child outcomes after controlling for SES, grade level, and general academic ability. When children's reading exposure was taken into account, however, the predictive relation between home literacy environment and outcomes was reduced to a statistically non-significant level. That is to say that home literacy experiences are still important to consider, but not independently from children's reading exposure.

The role of parents in children's literacy development is paramount, but changes according to the age of the child. For instance, preschooler's reading often takes the form of shared storybook reading (Bus, van Ijzendoorn, & Pellegrini, 1995) where the parent actively reads books with their child. In contrast, with older children this dynamic shifts from being read to, to reading independently. Similarly, parents are instrumental in their young children's vocabulary growth (Biemiller, 2003; Hoff, 2001; Joshi, 2005) but after grade 3, children transition to become more independent learners and readers who no longer rely exclusively on their parents for vocabulary exposure. A similar trend is found in regards to children's spelling skills with researchers reporting that readers acquire knowledge about orthographic structure of words while reading independently (Cunningham, 2006).

It may be the case in the present study that children's home literacy experiences laid the groundwork for grade 3 and 5 children's continued reading habits. Even when children become independent readers, parent involvement may take the form of asking questions about books, openly sharing and discussing books, and encouraging reading and praising their children's efforts. Such encouragement may positively influence the child to read more, in turn benefiting their achievement. Research is in accord with this

view, as parent involvement in the form of monitoring, enforcing, or helping with homework has been shown to boost students' perceived control and competence and offers a sense of security and connectedness that helps students internalize academic values (Gonzalez-DeHass et al., 2005). In addition, parent involvement has been shown to transcend time continuing to influence children's educational and literacy outcomes into teenage and adult years (Desforges & Abouchaar, 2003). Clearly, the impact of parents and the home literacy environment to children's literacy remains an important factor to consider when examining children's reading for pleasure. In fact, 77% of parents in the present study reported motivating their children to read using various types of motivational methods including: providing access to reading materials, encouraging their child to read, acting as an adult reading model, using books as part of a reward system, and encouraging their child's reading autonomy.

The third hypothesis in the proposed model was that reading exposure mediated the relation between children's reading motivation and child outcomes. Partial support for this hypothesis was found. Regression analyses revealed that reading motivation continued to be a significant and unique predictor of children's reading and spelling after entering reading exposure. The prediction of the proposed model was based on past research that reported that children who are more intrinsically motivated to read (Wigfield & Guthrie, 1997), who have higher reading self-concepts (Chapman & Tunmer, 1995), and who have positive reading attitudes (McKenna et al., 1995) engage in more frequent reading than children who do not have these characteristics. The current findings suggested, however, that over and above reading exposure, children's reading motivation played a greater role in children's reading and spelling ability than initially expected.

It may be the case that with increased reading motivation, engagement in the reading process is positively influenced thereby affecting the amount of information the child absorbs while reading. Research is in accord with this view concluding that engagement in reading is a joint function of motivational processes and cognitive strategies during reading (Guthrie & Wigfield, 2000). Highly engaged readers are intrinsically motivated and utilize cognitive strategies more so than less engaged readers who display lower motivation and less use of comprehension strategies when reading text (Guthrie & Wigfield, 2000). Furthermore, the level of reading engagement is positively related to children's reading outcomes (Wigfield et al., 2008). In addition, increased involvement and engagement in books allows children to explore and experience through their imaginations other worlds and other roles while at the same time contributing to their personal, social, and reading development (Sainsbury & Schagen, 2004). In sum, it may be that reading exposure provides experience and practice, but reading motivation somehow optimizes the learning that occurs during those experiences. The role of reading motivation, however, was limited to literacy outcomes not oral vocabulary. Continued research aimed at explaining the relations between reading motivation and children's outcome measures, especially children's vocabulary, is encouraged.

In addition to the pathways investigated, the present study also provided a novel contribution to the extant literature regarding the multidimensionality of children's reading motivation (Baker & Wigfield, 1999; Guthrie et al. 2007; Wigfield & Guthrie, 1997). In the current research, dimensions including intrinsic reading motivation, reading self-concept, and reading attitudes were statistically shown to be a single unique construct representative of global reading motivation. This suggests that the examination of reading motivation is broader than originally posited and encourages further examination

particularly of children's reading attitudes in relation to other dimensions of reading motivation.

Finally, the second main objective of the current study was to examine grade and gender differences across children's reading exposure, intrinsic reading motivation, reading self-concept, and attitudes towards reading. In contrast to previous research findings that have shown consistent grade and gender effects (McKenna & Kear, 1995; Sainsbury & Schagen, 2004), the current study found no significant differences across grade and gender for any standardized or questionnaire measure. One possible reason for such null findings may simply be due to the sample size of this study and subsequent lack of statistical power. Previous research studies reporting significant grade and gender differences have predominantly sampled large numbers of children spanning various grade levels (Kush & Watkins, 1996; McKenna & Kear, 1990). As expected, a review of the key literature reveals that the greatest effects are found with samples numbering in the thousands (see, McKenna & Kear, 1995). As a result, it is perhaps not that surprising to have found null effects across grade and gender with the relatively low sample size found in this study.

Overall, it is important to note that this study was correlational in nature and as such causal statements cannot be made. What was found, however, are robust relations among children's reading exposure, home literacy environment, reading motivation, and children's achievement measures after controlling for SES, grade level, and general academic performance. The implications of this current study are twofold. First, findings provided support for a comprehensive mediated model of children's literacy performance that integrated multiple predictor, control, and outcome measures. Second, building from an empirically sound model such as this one, researchers are able to make suggestions for

intervention work aimed at improving children's literacy performance. Specifically, findings from the current study highlighted the positive relations between children's reading exposure, home literacy environment, reading motivation, and literacy related skills. Based on the findings from this current study, a summer book reading intervention aimed at improving poor achiever's literacy skills is presented next.

IV. Study 2 Literature Review: Children Learning During the Summer Achievement: The Summer Slide

For some time, there has been growing concern and heightened interest in the decline in children's achievement during the summer months. Published research on the effect of the summer break on student performance dates back to 1906 (White, 1906). Over time, researchers adopted the term *summer slide* to describe the loss of academic skills that occurs over the summer break when school is not in session. The effects of summer vacation on academic achievement was examined in the only narrative and meta-analytic review to date (Cooper et al. 1996). Although their initial review included 39 studies, Cooper et al. eliminated studies due to methodological concerns that resulted in the inclusion of 13 studies published since 1975. On average, 153 children were tested per study and were between grades 1 and 8. Overall, they estimated that, over the summer break, the typical child loses a little more than one month of skill or knowledge in math and reading/language arts combined. Furthermore, this summer slide was found to have a pronounced effect for low-income children's reading achievement. While middle-class children's reading skills remained mostly stable over the summer months, Cooper et al. estimated that a poor child's reading score falls approximately three months behind their peers upon returning to school in the fall.

In addition to the documentation of a summer achievement gap, researchers have reported a cumulative effect of summer learning loss that can accrue over a child's elementary school career (Entwisle, Alexander, & Olson, 1997). Such cumulative effects have been found to play a significant role in children's course placement in high school, rate of high school dropout, and college attendance (Alexander, Entwisle, & Olson, 2007). Importantly, children from low and middle-income backgrounds show similar achievement growth while in school. Thus, researchers posit that it is the accumulation of summer losses that is responsible for the growing summer achievement gap and not a child's schooling experiences (Alexander et al., 2007).

Moreover, researchers examining the summer slide and its relation to children's achievement (Alexander, Entwisle, & Olson, 2001; 2007; Phillips & Chin, 2004) posit that SES, access to learning materials, and children's home environments may all be possible contributors to the widening summer achievement gap. In fact, it is speculated that low-SES status translates into fewer learning opportunities due to limited access to learning materials as well as a lack of support for learning related activities within the home environment over the summer months (Entwisle & Alexander, 1994; Heyns, 1978). Entwisle, Alexander, and Olson (2000) labeled this phenomenon *The Faucet Theory* which posits that through the school year the resource faucet is turned on and all children gain equally as a result of exposure to the same resources provided by the school. When school is not in session such as in the summer months, the faucet is turned off which can then result in some children experiencing a significant decrease in available resources compared to others. This occurrence is especially critical when considering social class differences and differing levels of child achievement (Borman & Dowling, 2006). During the summer months, lower-income families simply cannot match the resources supplied

by the school during the regular school year and as a result, their child's achievement declines further while not in school. Middle-income families, on the other hand, can compensate to a certain extent for the absence of school resources and their child's achievement remains stable or continues to grow over the summer recess (Borman, Benson, & Overman, 2005).

It is becomingly increasingly clear that what happens during the summer break has important implications for understanding and addressing the summer achievement gap that separates low-achievers from their higher-achieving peers. To this end, the current study explored strategies that could be implemented in the summer to help circumvent reading achievement losses for their children.

V. Study 2 Literature Review: Interventions to Improve Reading

Summer Programs

Research consistently reports summer reading loss among low-income, minority, and low-achievers (Alexander et al. 2001; Cooper et al. 1996; Heyns, 1978). Further, the finding that such effects are cumulative (Alexander et al., 2000) exacerbates the need for implementing strategies that will reduce the disparity of skills across students. Discussed in length in Study 1 were the numerous benefits associated with reading for pleasure. From this review it was determined that both the amount a child reads for pleasure and their exposure to print are positively related to their literacy achievement (Anderson et al. 1988; Braten, Lie, Andreassen & Olaussen, 1999; Cunningham & Stanovich, 1991; Sénéchal & LeFevre, 2002; Stanovich & Cunningham, 1992; Stanovich & West, 1989). Such findings were also corroborated in Study 1 of the current research whereby consistent positive relations between children's reading exposure and all outcome measures were reported. Moreover, reading exposure was found to be a significant and

unique predictor of children's reading ability, vocabulary, and spelling skills after controlling for SES, grade level, general academic ability (i.e., math ability), home literacy environment, and reading motivation.

When investigating how to improve children's reading achievement during the summer, research is largely divided between two approaches: 1) implementation of summer school programs; or 2) providing access to resources. First, strategies for improving children's reading over the summer often take the form of remedial summer school programs for which many reveal conflicting results in improving children's reading skills. Some programs report positive effects (Borman & Dowling, 2006; Luftig, 2003; Quirk & Schwanenflugel, 2004; Schacter & Jo, 2005; Stone, Engel, Nagaoka, & Roderick, 2005), while others demonstrate null effects (Ascher, 1988; Cooper, Charlton, Valentine, & Muhlenbruck, 2000; Karweit, 1993). Arguably, such conflicting results may be due to the inherent nature of such programs.

Many of these programs focus heavily on remediation of reading difficulties and often require full day attendance (Luftig, 2003; Quirk, 2004; Schacter & Jo, 2005). In addition, many programs target specific populations of children at-risk for reading failure or who are in jeopardy of grade retention. As a result, summer school can be viewed as being punitive and attendance in such programs can be especially low for poor achievers (Alexander et al. 2001). Moreover, these programs typically consider the effects of ethnic and socioeconomic status, but rarely explore the role of children's motivation or interest in their leisure reading (Borman & Dowling, 2006; Kim, 2006; Luftig, 2003; Schacter & Jo, 2005). Additional limitations to summer school programming include, poor attendance rates, short duration, low academic expectations (Ascher, 1988; Heyns, 1978),

teacher fatigue, and high cost (Borman & Dowling, 2006) all of which place undo strain on school systems and creates resistance in participating in summer programs.

Furthermore, evidence suggests that children from different socioeconomic backgrounds are affected differently by summer reading programs. In a meta-analysis reviewing 93 studies of summer school, Cooper et al. (2000) concluded that middle-class children benefit more from summer school compared to more disadvantaged children. Thus contrary to our best efforts, summer reading programs may actually widen the achievement gap when provided for all children.

Considering the criticisms of summer school programs, a second approach to improve children's reading in the summer stems from suggestions that simply increasing a child's access to books may be enough to keep the learning faucet open when schools are closed during summer vacation (Kim, 2006; Kim, 2007; McQuillan & Au, 2001). Indeed, research is in accord with this view as Heyns (1978) found that the number of books a child read over the summer months was positively related to their achievement gains. As well, other studies (e.g., Entwisle et al, 1997; Kim, 2004) have found that the volume of summer book reading was positively related to fall reading achievement.

When providing children with access to books, however, it is important to consider providing a variety of interesting reading materials (Neuman, 1999), acknowledging children's book interests and preferences (Worthy, Moorman, & Turner, 1999), and matching books to reader ability (Kim & White, 2008). In line with each of these suggestions, four noteworthy studies were conducted in order to assess the effects of voluntary summer reading and access to books (Kim, 2006; Kim, 2007; Kim & Guryan, 2010; Kim & White, 2008). In each study, children were sent books through the mail at weekly intervals over the course of the summer. In the first study (Kim, 2006) 331

children in grades 1-5 were randomly assigned to a treatment or control group. Children in the treatment group received 10 books during summer vacation while children in the control group received 10 books at post-testing. During the last week of school, teachers were asked to (a) tell the children about the study; (b) encourage them to read over the summer; and, (c) show the children how to complete postcards with questions about the books they would read. Teachers did this through lesson plans conducted before the end of the school term. Children then went on summer vacation and returned in the fall for post-testing. The magnitude of the average treatment effect size for all students was small at .04 and no significant group differences for reading achievement were found. From this, Kim concluded that beginning readers are unlikely to benefit from a voluntary reading intervention where they receive no assistance from teachers, parents, or tutors when decoding unfamiliar words.

In the second intervention, Kim (2007) recruited 552 grade 4 children. In this study, teachers were asked to teach children five comprehension strategies to be used while reading over the summer including: (1) rereading; (2) asking questions; (3) making predictions; (4) summarizing; and, (5) making connections. Teachers also provided instructions to read out loud to a family member regularly. Again, children then went on summer vacation and returned in the fall for post-testing where measures of silent reading, oral reading, summer reading activities, book ownership, and reading achievement were administered. The magnitude of the average treatment effect size for all students was again small at .08, but twice the size of that in the original study. Again, no significant group differences were found for reading habits across the sample. From this, Kim concluded that a voluntary intervention providing children with books and encouraging reading at home would potentially have the greatest benefit for poor readers.

In the third study, Kim and White (2008) tested a total of 400 grade 3, 4, and 5 children. Again, teachers played a major role in teaching children reading comprehension and reading fluency strategies before the end of the school term. In this regard, this study followed from their previous work. Novel to this research, however, was that parents were asked: (1) to encourage their child to read books sent to them over the summer; and (2) to remind their child to complete the forms sent with each book. The magnitude of the average treatment effect size for all students increased to .14 and significant group differences were found for reading achievement favoring groups that had parents completing the tasks listed above. These findings corroborate those from a meta-analysis conducted by Cooper et al. (2000) that reported an average effect size of .14 for random assignment studies of remedial summer programs. This study's comparability to the effects found for summer remedial programs is promising, especially considering its smaller cost.

In the fourth and most recent study, Kim and Guryan (2010) sought to replicate and extend the previous three summer reading intervention studies with 370 grade 4 children identified as English language learners with high-poverty rates. Children were randomly assigned to one of three experimental groups including a treatment group who received 10 self-selected books in the mail, a family literacy group who received 10 self-selected books in the mail and were invited with their parents to three two-hour family literacy presentations, and a control group who received 10 self-selected books at post-test. Similar to past research, teachers gave reading lessons to all children teaching them how to use multiple reading comprehension strategies as well as how to read aloud from books with family members before the end of the school year.

This recent study extends Kim's previous work (Kim, 2006; Kim, 2007; Kim & White, 2008) in three main ways. First, the researchers have selected a sample of children considered at-risk for reading failure. Second, they have added a parent training component and third, they have allowed children to choose their own selection of books. Overall, they hypothesized that children in the family literacy group would improve the most on measures of reading comprehension and vocabulary compared to the treatment group and control group. This hypothesis was not supported, however, as no significant group effects were found for reading comprehension or vocabulary even though children in the treatment and family literacy groups reported reading more books than children in the control group. They argued that such findings may have been due to the nature of the children sampled. For instance, as English language learners these children were performing at the 24th percentile for reading comprehension which may indicate that they may also lack adequate decoding skills and fluency ability to be able to benefit from such a program. Moreover, they argued that by allowing the children to select their own books they may have compromised the matching of these books to the children's actual reading ability levels.

Arguably, the small effects seen for all four studies could be a result of diluted teacher effects whereby children simply "forgot" or did not use the learned strategies at an optimal level as a result of limited support over the two-month recess from school. Furthermore, the inclusion of parents in the interventions resulted in mixed findings. In Kim and White's study (2008), parental encouragement over the summer to continue reading and to complete the forms was influential as evidenced by nearly a two-fold increase in treatment effect size. In the most recent study, however, having parents attend up to three two-hour parent training sessions concentrating on teaching reading

comprehension strategies in the form of asking their child open-ended questions before, during, and after they complete a book, yielded no significant effects for children's reading comprehension or vocabulary. These null findings may be due to a number of reasons: a) poor participation or follow-through on part of the parents, b) lack of support and follow-up with parents throughout the summer, and c) the narrowed focus of the parent's involvement.

As a result, the present research increased parental involvement and scaffolding is predicted to result in greater treatment effects for children's achievement measures compared to previous studies. In fact, research supports the view that with adequate support, parents can be effective participants in academic interventions (Galloway & Sheridan, 1994; Resetar, Noell, & Pellegrin, 2006). Consequently, the current research continued serving as a cost effective strategy for increasing children's reading over the summer in comparison to standard summer remedial programs and also trained parents to use easy and effective reading comprehension, vocabulary acquisition, and oral reading fluency strategies while they actively read with their child on a regular basis.

Kim's work is both an innovative and cost efficient approach to improving children's reading achievement in the summer when school is not in session (Kim & White, 2008). The summer vacation from school is particularly detrimental to disadvantaged or poor performing children in early and intermediate elementary grade levels. The following section will explore intervention programs further, but will highlight both the importance and influence of parent involvement in children's reading habits and achievement.

Other Programs: Facilitating Learning using Parent Involvement and Paired-Reading

Parent strategies such as reading to and with their child as well as participating in a structured paired reading exercise have been shown to benefit children's reading frequency, interest, engagement (Saint-Laurent & Giasson, 2005), as well as reading achievement (Clarke-Stewart, 1998), expressive language skills (Whitehurst et al. 1994), and produces cognitive and affective benefits for elementary children (Baker 2003). Studies on the effects of reading storybooks aloud to children have mostly been done with preschool children under the pretense that before children can read on their own, parents need to read to them (Meyer, Stahl, Linn, & Wardrop, 1994). However, in Ivey and Broaddus' (2001) survey of what makes students want to read in grade 6 classrooms, the top two child responses to the question "which reading activities do you enjoy most in this class" were teacher read-alouds, where the teacher reads books aloud to the class, and free reading. As a result, evidence suggests that adults reading aloud to children remains an enjoyed literacy activity even for older elementary students (Dreher, 2003).

As children become more skilled readers, parents tend to move away from being the sole reader and invite their emergent reader to take a turn. Research suggests that listening to children read also has marked benefits to reading development. An early study by Hewison and Tizard (1980) revealed that the amount of time mothers spent listening to their child read had the highest correlation with the child's success in reading. Furthermore, how much parents listen to children reading is related to children's reading accuracy and comprehension (Wilkes & Clarke, 1988) especially if the parent corrects mistakes while listening (Azar, 1995). During shared parent and child reading the adult fosters the child's development by providing the scaffold necessary for the child to

perform at their highest level and also serve as a model, teacher, and support for the child's efforts to read (Clarke-Stewart, 1998). Each of these components (i.e., listening to child read, shared reading, parent modeling of reading, and correction) are typically found within parent training programs used to foster children's reading skills.

Perhaps one of the most popular parent training programs used to foster children's reading is a program developed by Morgan (1976) called Paired Reading. The procedure provides children with a powerful reading model (the parent) and focuses on positive reinforcement for correct reading responses (Law & Kratochwill, 1993). Emphasis is placed on fluency and the extraction of meaning from the text with sessions lasting from five to fifteen minutes a day, for five days of the week (Topping, 1986). At the start of each session, the parent and child begin reading the chosen book together and the child signals when they want to take over and read to their parent. As the child reads, the parent gives corrective feedback for incorrect words and praise for correct reading by the child. Paired reading has been reported to have remarkable success with children between the ages of 6 and 14 and has maintained its success with samples of children exhibiting reading delays as well as those with average reading performance. Furthermore, projects have shown gains in reading accuracy and comprehension (Fiala & Sheridan, 2003) over periods as short as five weeks (Topping, 1986).

In sum, research supports the view that parents have a significant effect on their children's reading frequency, self-concepts, motivation, and attitudes. In addition, shared reading interactions between parent and child are especially important for children's reading development. As a result, the current study had parents follow a modified paired reading program for eight weeks. Similar to classic paired reading sessions, parents and children took turns reading from a given book and parents continued to provide support,

encouragement, and correction. In addition, parents implemented and scaffolded reading comprehension, vocabulary, and oral reading fluency strategies before, during, and after the paired reading sessions.

Other Effective Strategies for Improving Reading Skills

There are a number of effective strategies that can be used to improve reading comprehension, vocabulary acquisition, and oral reading fluency. In fact, many of these strategies can be easily implemented in a child's home while reading with a parent. In the following section, effective strategies for improving reading achievement and oral language skills are discussed.

Reading comprehension. Reading comprehension, simply put, is the basic understanding of written text (Cain, 2003). However, it remains a complex cognitive process that is related to a number of prerequisite skills. For instance, reading comprehension has been found to be positively related to vocabulary (Biemiller, 2003; NRP, 2000), word recognition (Francis, Fletcher, Catts, & Tomblin, 2005) and decoding skills (Kendeou, van den Broek, White, & Lynch, 2009; Schatschneider, Harrell, & Buck, 2007,), as well as fluency (Kuhn & Stahl, 2003), narrative comprehension (Lonigan, Burgess, & Anthony, 2000), reading motivation (Guthrie et al. 2004), and inference ability (Oakhill & Cain, 2000). The concern is when children are unable to comprehend what they are reading their academic performance can be negatively affected (Howe, 2000). To this end, the distinction between *poor comprehenders* and *good comprehenders* has been made in an effort to explain why some children may be able to read and pronounce the words in a text but will fail to truly understand the material and answer specific questions about the passage (Cain, 2003; Diakidoy & Stylianou, 2005; Engen & Hoien, 2002; Oakhill & Cain, 1997; Oakhill & Cain, 2000).

From such studies it is evident that good and poor comprehenders differ markedly. For instance when telling stories, poor comprehenders include fewer causal connections. Their processing capacity seems to be impaired, they are poorer at producing structured and purposeful stories, they have difficulty inferring implied information in text, and also have problems inferring specific meanings of words (Cain, 2003; Oakhill & Cain, 1997). These specific deficits are argued to be significant deterrents to adequate reading comprehension. In addition, poor comprehenders are believed to lack the general knowledge required to make inferences (Oakhill & Cain, 2000). Without this ability, these children are unable to go beyond what is stated explicitly in the text thus limiting the scope of their comprehension. Furthermore, poor comprehenders may simply be unable to realize that inferences are even necessary and instead focus too much on the literal meaning of the text while good comprehenders are able to assess whether they are having comprehension difficulties and if so, are able to utilize specific comprehension techniques in an attempt to remedy such problems (Oakhill & Cain, 1997).

Comprehension strategies can be acquired informally to some extent, but greater understanding has been found to result from formal instruction (NRP, 2000). Children's comprehension can be improved by teaching them specific cognitive strategies using two possible approaches: *specific skills instruction* and *strategy instructions* (see Johnston, Barnes, & Desrochers, 2008 for review). In both approaches, an explicit approach to instruction is considered essential, but many interventions adopt both approaches whereby they focus on strategic approaches and also provide explicit teaching of certain skills. Students must learn (or be scaffolded to learn) how to use the comprehension processes of summarizing and retaining information independently as they read, identifying main ideas, and recalling details. (Block, Parris, Reed, Whiteley, & Cleveland,

2009). In fact, evidence suggests that teaching a combination of reading comprehension strategies is the most effective in promoting children's reading comprehension (Foorman et al. 2006; NRP, 2000).

A well-defined approach to improving children's text comprehension is an instructional procedure called Reciprocal Teaching (RT) (Palincsar & Brown, 1984). Through scaffolded instruction of four strategies, a) generating questions, b) summarizing the text, c) clarifying word meanings and confusing passages, and d) making predictions, the dialogue group leader (a teacher or student) models use of the strategies, provides knowledge about the strategies, and helps the children apply strategies to the text being read. The overall goal is to promote the self-directed use of the learned strategies (Hacker & Tenent, 2002; Palincsar & Brown, 1984). Many studies have been conducted examining the efficacy of RT and the results clearly support RT in promoting reading comprehension (for a review, see Rosenshine & Meister, 1994). However, difficulties in implementing this program into regular classroom instruction have resulted in teachers making many modifications to the program in order to adapt RT to their classroom environments (Hacker & Tenent, 2002).

One recommendation to ease implementation in the classroom was to pair RT with peer-assisted learning where children would read in pairs (Fuchs & Fuchs, 2001). In their analysis of modified RT instructions, however, Sporer, Brunstein, and Kieschke (2009), found that RT in student pairs was less successful in building reading comprehension skills as was RT that was only instructor guided when compared to a traditional RT training group. What remains untested, however, is whether RT is amenable for use outside the classroom environment, specifically within the home literacy environment where parents can scaffold reading comprehension strategies for

their children. Considering this gap in the literature, the current study implemented a modified RT paradigm where parents scaffolded their child's reading comprehension using specific strategies that had children reread, predict, ask questions, make connections, and summarize the material that they read (Kim & White, 2008) in order to improve overall understanding of the text.

Vocabulary. Children who have poor vocabulary knowledge are at greater risk for reading comprehension difficulties (Biemiller, 2003, Joshi, 2005; Nash & Snowling, 2006) that can then result in the avoidance of reading altogether and subsequent loss of opportunities to understand new words. Children with better vocabulary knowledge, on the other hand, tend to read more and improve their comprehension through the use of newly acquired vocabulary (Biemiller, 2003).

The growth of a child's vocabulary appears to be heavily influenced by parental practices, especially before third grade (Biemiller, 2003; Hoff, 2001; Joshi, 2005). Children are shown to use words that their parents use with them in conversation more readily than others and actually acquire larger vocabularies as a result of their parents using more words (Biemiller, 2003). There is also substantial research illustrating that home language support and school instruction directly influence vocabulary and comprehension ability (Biemiller, 2003; D'Angiulli et al., 2004; Joshi, 2005; Sénéchal & LeFevre, 2002) with children of low SES families at greatest risk for underdeveloped vocabularies. Hart and Rinsley (1995) found that children from higher SES families were exposed to approximately 30,000 words per year, while those in lower SES families were exposed to only 10,000. Furthermore, higher SES families were shown to be more encouraging, supportive and better at explaining the meanings of words. In contrast,

lower SES children exhibited vocabularies largely loaded with negative words and commands (Joshi, 2005).

While vocabulary acquisition varies individually, vocabulary size also varies across the elementary years. It is estimated that the average child will have acquired approximately 9000 words (including root words, derived words, inflected words, literal compounds, and idioms) from first to third grade, and 20,000 words from third to fifth grade (Biemiller, 2003; Hoff, 2001). This growth follows the trend of 2.2 words daily from one to eight years of age and 2.4 words daily from 9 to 12 (Biemiller, 2003). Thus, children can learn between 800 and 900 root words per year. Surprisingly, however is the finding that by fifth grade, children placed in the bottom portion of their class still have not acquired the 7100 root words that their classmates had in grade 2 (Biemiller, 2003). Unfortunately the impact of low vocabularies does not become apparent until grade 3 and is especially evident in each subsequent grade level. It is during these more advanced academic stages that comprehension begins to play a larger role in learning. Thus, the impact of limited vocabulary on comprehension becomes significant. By grade 3 the gap in reading skills becomes too large for many children to catch up to their classmates. Especially for at-risk or disadvantaged children, it is necessary to invoke vocabulary training or in the least increase their exposure to new words each day (Biemiller, 2003; Shany & Biemiller, 2009).

In any given year about 300 words are learned in school through direct vocabulary lessons (Joshi, 2005). After grade 4 most words are learned incidentally through books and stories (Joshi, 2005). Unfortunately, poor readers learn fewer words from reading than good readers because poor readers prefer to read easier material which offers little difficulty and future vocabulary development (Joshi, 2005). Furthermore, poor readers

develop their vocabularies at a much slower pace which adds to the gap between them and their classmates. When children read books that are moderately challenging, they have a better opportunity to learn new words than when reading books that are below their reading ability. As a result, poor readers who choose easy material contribute unknowingly to their own stagnant vocabulary. Conversely, if text contains too many unfamiliar or difficult words then word learning becomes difficult and frustrating to the students and may distort the meaning of the text or disrupt the flow of reading especially for less skilled readers (Freebody & Anderson, 1983).

Due to its connection with reading comprehension and the cumulative effect poor vocabulary knowledge can have on future academic standing, it is important to initiate vocabulary building strategies early. There are a number of strategies to aid children's vocabulary acquisition. First, evidence suggests that reading orally to children several times with 5-10 word meaning explanations, is an effective form of vocabulary teaching for primary level children (Biemiller, 2003). A second strategy is the direct explanation of words or the definition method where children learn novel words by being told their meanings (Nash & Snowling, 2006). This strategy, however, is limited due to the finding that on average, children do not learn more than three words per day (Biemiller, 2003). As a result, an alternative strategy is to learn new words from spoken or written context. In this strategy, children can be taught to derive the meaning of an unknown word by using pieces of information or cues in the context of the sentence to infer the meaning of the word (Nash & Snowling, 2006). This strategy has been found to be especially effective over time when compared to a group of children who were taught new vocabulary words using the definition approach (Nash & Snowling, 2006).

The current study utilized the above mentioned vocabulary acquisition strategies. First, parents read aloud with their child in modified paired reading sessions and provided word meaning explanations as needed. Second, parents were encouraged to have their child identify five to ten unknown or unfamiliar words from each book with which they could find the meaning of together using contextual cues or using the dictionary as an aid. Finally, books were matched to the child's reading level with the underlying rationale that books matched to difficulty level would present the child with reading material that was neither too easy or overly frustrating for the child to read.

Oral reading fluency. Reading fluency is defined as, "the ability to read connected text rapidly, smoothly, effortlessly, and automatically with little conscious attention to the mechanics of reading such as decoding" (Meyer & Felton, 1999, p.284). As a result, children who are fluent readers are able to read orally with speed, accuracy, and proper expression. Conversely, a child with poor reading fluency reads haltingly, slowly producing one word at a time and very often with no expression. They tend to ignore punctuation resulting in sentences becoming meaningless bundles of words which contributes to confused and limited comprehension (Hasbrouck, Ihnot, & Rogers, 1999). As a result, reading for a nonfluent child can become an unpleasant experience they try to avoid due to their struggle to decode words and understand the text.

Reading fluency is identified as one of several component skills associated with reading comprehension (Desrochers & Major, 2008; Kuhn & Stahl, 2003; NRP, 2000). If a reader has to spend too much time and energy attempting to decode and identify the words, they will not be able to concentrate on deciphering the meaning of the text which can then negatively impact their overall understanding of the text (LaBerge & Samuels, 1974; Reis, Eckert, McCoach, Jacobs, & Coyne, 2008).

A literature review by Kuhn and Stahl (2003) and a meta-analysis by Therrien (2004) reported that the most commonly used method for facilitating oral reading fluency was a technique called Repeated Reading. Repeated Reading is an evidence-based strategy where readers are asked to reread passages (at a level appropriate for the reader) until a particular reading rate is achieved (Wolf & Katzir-Cohen, 2001) or until the reader demonstrates a set number of improvements (Weinstein & Cooke, 1992). Repeated reading has been shown to be an effective means of increasing reading accuracy, rate, and comprehension (Chard, Vaughn, & Tyler, 2002) as well as inferential comprehension (Therrien, Wickstrom, & Jones, 2006), and vocabulary, word comprehension, and passage comprehension (Vadasy & Sanders, 2008). Moreover, repeated reading was found to be the only well-supported approach for improving reading fluency (NRP, 2000). Specifically, guided repeated oral reading procedures including guidance from teachers, peers, or parents had significant and positive impacts on word recognition, fluency, and comprehension across a range of grade levels (NRP, 2000). Repeated reading can be assisted or unassisted, however, reading with a model was found to be more effective for lower-skilled readers than reading without a model (Chard et al., 2002).

Most repeated-reading interventions are relatively short with some reporting lengths from 1 to 15 days (Wolf & Katzir-Cohen, 2001), to as little as four sessions (Meyer & Felton, 1999). For the purpose of the present research, parents facilitated their children's oral reading fluency in two ways. First, children read aloud from each book in a paired-reading session with their parent. During this time if a child had difficulty comprehending the material, parents were encouraged to have their child reread the passages aloud until he/she understood the material. In addition, at the end of each book

parents asked their child to reread their favourite part aloud to an adult or other family member. Second, the paired-reading session also had parents reading sections of the books aloud to their child. While reading aloud to their child, parents were effectively scaffolding proper reading technique, expression, prosody, flow, and other forms of fluency.

Overall, the present research trained parents to utilize specific reading comprehension, vocabulary, and oral reading fluency strategies that have been shown to be effective in improving children's skills in these respective areas. Description of the paired-reading intervention and methodology of the present study are presented next.

VI. Study 2: A Paired-Reading Intervention

The present summer book reading intervention attempted to improve grade 3 and 5 children's reading ability, oral language skills, and reading motivation. Specifically, a targeted sample of children said to be at-risk for academic failure were recruited and were found to be performing below their age expectations on measures of achievement and oral language. The intervention took place during the summer vacation when school was not in session and participating children were randomly assigned to either a *Book Reading Group* or *Control Group.* Children in the Book Reading Group received 8 books at a rate of one book per week while children in the Control Group received 8 books at post-testing when school reconvened in the fall. It was anticipated that children's reading frequency would be facilitated via the access to books that were both interesting and at an appropriate reading level for each student. Additionally, parents of children in the Book Reading Group were instructed to participate in paired-reading with their child for 5 to 15 minutes each day, for five days of the week. Parents were trained prior to the start of the intervention and received a parent training manual for quick reference. During these

interactive reading sessions, parents were instructed to use specific reading comprehension strategies to improve text understanding, to discuss the book with their child, and to build vocabulary skills while at the same time improving oral reading fluency and increasing engagement in reading. Alternately, parents of children in the Control Group received the parent training manual following post-testing. It was predicted that at the end of this 8-week intervention children in the experimental group would exhibit greater reading frequency and improved reading ability, oral language skills, and reading motivation than children in the control group.

Method

Participant Selection

Children from Study 1 ($N = 116$) were screened based on their performance on a standardized measure of expressive vocabulary. Children with scores below age expectations were selected to participate in the current intervention study ($N = 57$). Descriptive statistics for selected and non-selected children are presented in Table 8. Once selected, it became evident that selected children were also performing below their expected age equivalencies on other standardized achievement tests including those related to reading ability (passage comprehension and word identification), receptive vocabulary, spelling, and math (See Table 9). A MANOVA revealed that across all achievement measures children selected for the intervention performed at levels significantly below their non-selected peers. The multivariate Hotelling's Trace, $F(6, 114) = 10.12, p < .0001$, and univariate results for passage comprehension, $F(1, 116) = 22.40, p < .0001$; word identification, $F(1, 116) = 22.20, p < .0001$; receptive vocabulary, $F(1, 116) = 31.05, p < .0001$; spelling, $F(1, 116) = 11.96, p < .001$; and math, $F(1, 116) = 5.41, p = .02$ were all statistically significant. Based on their poor performance across a

variety of academic skills, the selected children will hereafter be referred to as *poor achievers*.

Once selected, children were randomly assigned to either the Experimental *Book Reading Group* ($N = 28$) or the Control group ($N = 29$). Tables L1 and L2 in Appendix L show the sample's distribution according to age, grade, gender, and experimental group.

Pre-test Child Measures

For most measures, pre-test administration occurred as part of Study 1 and included: standardized measures of children's reading ability (passage comprehension and word identification), oral language skills (receptive and expressive vocabulary), spelling, and math achievement. Children's reading motivation (intrinsic reading motivation, reading self-concept, and attitudes towards recreational reading), frequency of reading for pleasure at bedtime and other times during the week, child book exposure, and parent forced choice (Yes/No) reports of motivating their child to read for pleasure were also measured at this time. Additional measures were administered and are detailed below and the timing of the pre- and post-tests are described in the *Procedure* section.

Oral reading fluency. Children's oral reading fluency was assessed using a grade appropriate passage taken from the *Rigby READS Teacher's Manual* (2005). This manual has been designed to be an informal tool to aid teachers in planning, teaching, and assessing children's reading skills. For the oral reading fluency test, children are asked to read a passage aloud and are stopped after one minute has elapsed. To obtain a reading fluency composite score, the total number of errors is subtracted from the total number of words read in one minute. Children in grade 3 were given a 158-word narrative passage while children in grade 5 were given a 188-word narrative passage with more difficult vocabulary embedded. See Appendix M for Grade 3 and Grade 5 passages.

Children's reading level. Children were matched to books according to reading difficulty using the Developmental Reading Assessment (DRA) score provided by children's teachers. Three times per year, in September, January, and June teachers conduct board mandated testing for all students to determine their reading level. In this assessment, the student and their teacher meet individually and the child reads to the teacher from a given book. The teacher scores the child on fluency, comprehension, and decoding ability and determines their overall developmental reading level. The child is then given a number to correspond with their reading level which can then be matched to reading materials and books both in and out of the classroom. For the present study, teachers provided participating children's results from the DRA June administration in order to match summer books to children's appropriate reading levels. Examination of the DRA scores revealed comparable means across experimental groups. On average, children in the *Book Reading Group* reported a mean DRA score of 35.5 (SD = 12.57) and children in the Control Group reported a mean DRA score of 37.7 (SD = 10.77).

Children's reading preference. Children's reading preferences were measured using an adapted form of a Reading Preferences Survey from Summers and Lukasevich (1983) and Kim (2006). This survey asked children how much they enjoy reading books from a list of 13 categories of children's book genres. Each response option included a smiley face representing one of four options: (1) I don't like it; (2) It's okay; (3) I like it; and, (4) I really like it! Embedded in four of the categories were sub-categories providing further detail about specific interests. For example, the category "Animals" was further divided into mammals, marine life, and reptiles. Responses allowed for children to receive books matched to their own individual reading interests. See Appendix N for the complete survey.

Make Children Read More Questionnaire. Children's opinions of what would make them want to read more were examined using the Make Me Read More Questionnaire. This questionnaire was developed for the purpose of this study and is a preliminary examination of specific external and internal factors that may influence a child's choice and motivation to read for pleasure and featured 17 close-ended items and one open-ended item where children could add other suggestions. Of the 17 items, three were teacher oriented (i.e., I would read more if...my teacher told me I am a good reader), four were parent oriented (i.e., I would read more if...I saw my mom/dad reading their own book), three were extrinsically oriented (i.e., I would read more if...I got a present/reward/prize for reading more books), four were interest oriented (i.e., I would read more if...the books were about my hobbies and interests), and three were reading level oriented (i.e., I would read more if...the book has pictures). After each item children were asked to put a checkmark in the YES column if the statement was true and an X in the NO column if the statement was false. See Appendix O for test items.

Post-test Child Measures

The same pre-test measures were administered and, where available, a different form of the test was used.

Reading comprehension. Children's reading comprehension was measured using the Passage Comprehension subtest of the Woodcock Reading Mastery Tests-Revised (WRMT-R; Woodcock, 1998). Refer to Study 1 for a detailed description of this measure. Form G was initially used in Study 1 and Form H was used at post-testing in the current study. Split-half reliability coefficients are reported to be the same for both forms.

Word identification. Children's word reading was measured using the Word Identification subtest of the Woodcock Reading Mastery Tests- Revised (WRMT-R; Woodcock, 1998). Refer to Study 1 for a detailed description of this measure. Form G was initially used in Study 1 and Form H was used at post-testing in the current study. Split-half reliability coefficients are reported to be the same for both forms.

Spelling. Children's spelling ability was measured using the Wide Range Achievement Test-4 (WRAT-4; Wilkinson & Robertson). Refer to Study 1 for a detailed description of this measure. The Blue spelling form was used in Study 1 and the Green form was used at post-testing in the current study. Alternate-form reliability coefficients are reported to be between .88 and .90 for children aged 7 to 11.

Receptive vocabulary. Children's receptive vocabulary was measured using the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997). Refer to Study 1 for a detailed description of this measure. Form B was used in Study 1 and Form A was used at post-test in the current study. Alternate-form reliability coefficients for raw scores are reported to be between .95 and .96 for children aged 7 to 11.

Expressive vocabulary. Children's expressive vocabulary was measured using the Expressive Vocabulary Test (EVT; Williams, 1997). Refer to Study 1 for a detailed description of this measure. No alternate form was available for use at post-test.

Reading motivation. For the purpose of the current study, children's reading motivation was composed of three constructs: children's intrinsic reading motivation, reading self-concept, and attitudes towards recreational reading. Refer to Study 1 for a detailed description of each measure. No alternate forms were available for use at post-test.

Frequency of reading for pleasure. Children's summer reading frequency was assessed using a two-question survey. Children were asked to indicate the frequency with which they read for pleasure at bedtime and at other times during a typical week during the summer (7-point scale: 0=never, 1=1 time a week…7=7 times a week). Both questions were read aloud to the children by the examiner.

Description of the Intervention

Children were randomly assigned to one of two groups: (1) *Book Reading Group*; and, (2) *Control Group*. The *Book Reading Group* received eight books over an eight-week period starting the first week of July until the end of August at a rate of one book per week. All books were purchased through Scholastic Canada and reflected various genres of interest in both fiction and non-fiction titles. On-line information was available for each book and included: genre of the book (i.e., mystery, adventure, fantasy, etc.), number of page numbers, summary of the book's storyline, and its developmental reading assessment (DRA) level. Based on this information, books were matched according to the child's indicated reading preferences from the available genres outlined in the *Reading Preferences Survey*. Books were also matched to children's reading level by matching teacher report of the child's DRA level to the corresponding DRA level of each book. In contrast, the *Control Group* did not receive any books over the eight-week period from July to August. Instead, children in this group received eight books that were similarly matched to their interest and reading level in the fall following post-testing.

Children in the *Book Reading Group* received one book package per week by mail that included a component for the child and component for the parent. The child package included (a) a new book matched to their interest and difficulty level, (b) a list of book titles that were similar to the given book to be used in addition to the given book for that

week, (c) a postcard that encouraged reading, and (d) a progress report that asked the child questions about the book. See Appendix P for exemplars of a postcard and a progress report.

The parent package included: (a) a book summary with details about each book, suggestions for comprehension questions to be asked, specific vocabulary words they could watch for, and a list of books similar to the one sent; (b) a postcard that reminded them to encourage their child to read and send back the progress report; and (c) a checklist to be returned for each book identifying the strategies used during paired-reading. Telephone follow-ups were conducted in the few cases where progress reports were not returned. See Appendix Q for exemplars of a book summary, weekly postcard, and progress report.

Upon receipt of each new book, parents were asked to engage in paired-reading with their child for 5 to 15 minutes each day for five days of the week. When the 5 to 15 minutes of paired-reading was complete, the parent encouraged their child to read independently. At the start of the next paired-reading session on the following day, the parent would ask their child what happened in the book while reading independently (i.e., summary, *wh*-questions, and retell strategies used for improving reading comprehension) and to identify words that were unfamiliar or unknown (i.e., vocabulary building exercise). At this time, parents were also asked to make use of other reading comprehension strategies (i.e., make predictions about what may happen next in the book and making connections) as outlined in their parent training booklet. Following this, parent and child would begin their paired-reading session for the day. This schedule and ordering of events remained constant over the eight-week intervention period. When the parent and child finished the book, the child was instructed to choose their favorite part

and re-read a 100-word passage from the book to their parent. When this was done the parent was instructed to sign the bottom of the child's progress report to be mailed back to the researcher in the postage paid envelope provided. If the parent and child finished the book before the next book package arrived in the mail, the parent was asked to encourage their child to find another reading source and to continue reading.

Parent and child feedback survey. At the beginning of September following completion of the intervention, parents and children in the *Book Reading Group* were asked to complete a feedback survey for the program. The parent survey consisted of nine questions of which six were forced choice (Yes/No) questions and the other three were open ended. Forced choice questions asked parents if they and their child enjoyed the program, if they would choose to participate in a similar study again, and if they felt: (1) the program was explained well; (2) the researcher was accessible and easy to talk to; and (3) the books were a good choice for their child. Open-ended questions asked parents to record any recommendations or changes they would make to the program and whether the program affected their child's amount of reading, desire to read, attitudes towards reading, or any other child behaviour. Finally, the last question asked parents to report any additional comments. Refer to Appendix R for survey questions.

The child survey consisted of six questions of which five were forced choice (Yes/No) questions. Children were asked: (1) if they enjoyed the program; (2) if they liked the books that were sent to them; (3) if they would participate in a similar study again; and (4) if the program made them read more, want to read more, and like reading more. Finally, open-ended questions asked the children to provide suggestions or changes they would make to the program and asked if they had any additional comments about the program. Refer to Appendix S for survey questions.

Control group survey. At the beginning of September following completion of the intervention, parents in the *Control Group* completed a survey over the telephone that recorded their child's reading habits over the summer. The survey consisted of seven questions including: (1) how many books their child read over the summer; (2) how many hours their child spent reading per week; (3) what types of books their child read; (4) whether their child was encouraged to read with others; and (5) if they read with their child during the summer. If parents answered Yes to this last question, they were given two additional forced choice questions that asked, (1) what the shared reading session looked like and (2) what reading comprehension, vocabulary, and engagement strategies were used during shared reading. Refer to Appendix T for survey questions.

Procedure

Pre-testing was done in December and January of the academic school year. Children were assessed using standardized measures of reading ability (passage comprehension and word identification), oral language skills (receptive and expressive vocabulary), spelling, and math achievement. Children's reading motivation (intrinsic reading motivation, reading self-concept, and attitudes towards recreational reading), frequency of reading for pleasure at bedtime and other times during the week, child book exposure, and parent forced choice (Yes/No) reports of motivating their child to read for pleasure were also measured and are described in Study 1. From Study 1, children for the current intervention study were selected and attended one 15 minute testing session at the beginning of June where they completed the Reading Preferences Survey, the Make Me Read More Questionnaire, and the oral reading fluency subtest.

Also at the beginning of June, parents of children in the experimental *Book Reading Group* were asked to attend a group information/training session that lasted

approximately one and a half hours. At this meeting, parents were introduced to the parameters of the study and their role in the study was explained. Furthermore, parents actively participated in group training exercises that outlined, discussed, and highlighted the specific reading comprehension, vocabulary, and fluency building strategies they would be exercising with their child during paired-reading. Special care was taken to ensure all parents understood the components of the study and both a group and individual question period took place following the group training. Finally, parents were provided with a parent training booklet that could be used as a quick reference guide to facilitate components of the intervention over the summer. Parents of children in the control group received their parent training booklet when children returned to school in September following post-testing. See Appendix U for the complete parent training booklet that is 17 pages in length.

Post-testing was conducted when children returned to school at the beginning of September. Children were reassessed on the same measures (different forms where available) as in pre-testing (Study 1); across two testing sessions lasting approximately 25 minutes. In the first testing session, children completed group administered tasks including: (a) attitudes towards reading; (b) intrinsic reading motivation; (c) reading self-concept; (d) frequency of summer reading; and, (e) spelling. In the second testing session, children met individually with a female tester and completed tasks measuring: (a) receptive vocabulary; (b) oral reading fluency; (c) passage comprehension; (d) word identification; and, (e) expressive vocabulary.

Results

Descriptive Statistics

Once selected for participation, children were randomly assigned to either the experimental *Book Reading Group* ($N = 28$) or to the *Control Group* ($N = 29$). Assignment of groups revealed no significant group differences across any key measure at pre-test. Children in the experimental group (*Median* = 4.5, *SD* = 2.48), however, reporting reading more often at bedtime than children in the control group (*Median* = 3.0, *SD* = 2.14).

Furthermore, no gender or grade differences were found across any standardized or questionnaire measure. As a result, gains scores were computed by subtracting children's pre-test raw scores from their post-test raw scores. Larger positive values show greater improvement from pre to post-test while smaller negative values are indicative of little to no improvement from pre to post-testing. Gains scores were used in all subsequent analyses. The use of difference scores when assuming change as a result of intervention is both supported and argued to be a reliable method in the literature (Williams & Zimmerman, 1996; Zimmerman & Williams, 1982).

Gains scores for each group at pre and post-testing for reading ability are shown in Table 10. Similarly, gains in oral language skills are shown in Table 11, gains in spelling ability in Table 12, and reading motivation gains in Table 13. Referring to children's gain scores it is evident that children in the *Book Reading Group* made greater gains in reading ability, oral reading fluency, vocabulary, and reading self-concept, but not for spelling, intrinsic motivation, and reading attitudes compared to children in the *Control Group*. Moreover, it is important to note that children in the *Book Reading Group* made gains in all areas with the exception of reading motivation. In comparison, children in the

Control Group exhibited gains in all areas except reading motivation and also exhibited losses across all reading ability measures.

Three composite measures for reading ability, oral language skill, and reading motivation were constructed based on children's gains scores. Construction of these variables was supported theoretically and via factor analyses reported in Study 1. Children's reading ability was created by averaging children's gains across passage comprehension, word identification, and oral reading fluency. Further, a composite measure representing children's oral language skill was created by averaging children's gains across receptive and expressive vocabulary. Finally, a composite measure representing children's reading motivation was created by averaging children's gains across intrinsic motivation, reading self-concept, and reading attitude. Composite measures were used in all subsequent analyses.

Testing for Intervention Effects

Examination of gain scores in Tables 10 through 13 revealed that the standard deviations for each variable were noticeably greater than the means. However, the magnitude of the differences was comparable across the two groups and Levene's homogeneity of variance test for all post-test analyses revealed no violations. Examination of Kolmogorov-Smirnoff test of normality, however, was conducted to investigate the possibility of a non-normal distribution across calculated gain scores. Across a number of variables the experimental and control groups showed equal departure from normal as evidenced by significant p values ranging from .002 to .038. As a result, three attempts to transform the data were conducted including: (1) Square root, which is recommended for slightly positively skewed data; (2) Logarithm, which is recommended for moderately positively skewed data; and, (3) Inverse, which is

recommended for severely positively skewed data. Results from each transformation however, did not yield improvement in the distribution across variables. As a result of the observed non-normality, a non-parametric test was utilized.

A Mann-Whitney U test is essentially a T-test used to compare differences across group means for non-normal distributions. For the purpose of the current study, three independent samples Mann-Whitney U tests were conducted to evaluate group differences for reading ability, oral language skills, and reading motivation. As expected, findings indicated a significant group difference for reading ability as evidenced by a significant one-tailed Mann-Whitney U p value of .01. Examination of the group means revealed greater gains for the book reading group ($M = 2.53$) compared to the control group ($M = -0.83$) and calculation of effect size yielded a medium effect (Cohen's $d = 0.5$). Contrary to expectation, no group differences for oral language skills ($p = .28$, Cohen's $d = 0.4$) were evident with reported gain score means of 9.14 and 6.26 for the book reading group and control group respectively. Similarly, no group differences for reading motivation ($p = .67$, Cohen's $d = -.04$) were found with means of -1.33 and -1.11 for the book reading group and control group respectively. It is also noteworthy to mention that the results attained using non-parametric procedures yielded the same group differences as inferential statistic procedures.

Supplementary Analyses

Treatment fidelity. Over the course of the intervention, parents and children were asked to complete a progress report for each book completed (total of 8 books). As a result, one measure of treatment fidelity is the evaluation of the number of progress reports returned to the researcher. On average, 4% of participants returned at least three reports, 7% returned five reports, 29% returned seven reports, and 50% returned all eight

reports indicating that 86% of participants completed at least half of the eight-week book intervention (i.e., 4 books). However, just returning the forms does not necessarily mean the child actually read the book. As a result, children were asked if they read the book to which 4% reported reading three, 8% read four, 4% read five and six, 36% read seven, and 44% read all eight books sent to them resulting in 85% of children reading at least 4 books over the eight-week intervention.

Children were also asked with each new book how many hours they had spent reading that week. Overall, 48% of children reported reading up to two hours per week, 40% reported reading between three and five hours, and 12% reported reading more than six hours each week.

Across the eight weeks, the amount of time parents spent participating in paired reading with their child varied. On average, parents reported reading between 15 to 20 and 20 or more minutes per day with their child. Over the first three weeks parents reported reading a few pages or chapters from the provided books, but beginning in week 4, however, parents reported reading more with their child (at least half of each book) for the remainder of the program.

Parents were also asked to identify which reading comprehension, fluency, vocabulary, and engagement strategies they used. Investigation of reading comprehension strategies revealed that for five or more weeks, parents reported encouraging their child to reread parts of the book (56%), make predictions about what would happen next (52%), summarize what they had just read (68%), make connections to other relevant information (36%), retell parts of the story (68%), and parents asked Wh-questions (52%). Investigation of fluency strategies revealed that for five or more weeks, parents reported listening to their child read aloud (76%); reported reading aloud

with their child as part of paired reading (68%); and encouraged their child to read aloud to others (64%). Investigation of vocabulary strategies revealed that for five or more weeks, parents reported encouraging their child to find unfamiliar words in the books (52%); worked with their child to figure out the meanings of words based on the context of the surrounding sentences (52%); gave their child the meaning of the word (56%); and looked up unfamiliar words in the dictionary (24%). Finally, engagement strategies were evaluated for which parents reported that for at least five weeks they encouraged their child to discuss the book with them (84%), made paired reading a fun activity (56%), and remained a positive and tolerant role model (72%). As a result, evaluation of the implementation of strategies used to promote reading comprehension, fluency, vocabulary, and reading engagement is very positive. Parents overwhelmingly reported using the various strategies more than half the time over the course of five weeks of the program.

Parent and child program feedback. Parents and children in the experimental group were each asked to complete a questionnaire asking for program feedback at the end of the intervention. Of the 27 parent-child dyads in the experimental group, 22 completed the questionnaires. From these questionnaires, 96% of parents and 86% of children reported enjoying this summer book reading program. Overall, 96% of parents believed the books were a good choice for their child coinciding with 91% of children reporting they liked the books that were sent to them. All parents felt the program was explained well and the researcher was accessible and easy to talk to.

Parents were asked both what they liked the least and the most about the program. Of the 50% of parents who responded, 23% said they enjoyed being involved in a summer reading program, 27% reported that the time they spent with their child was most

enjoyable, and 5% said they liked how the program helped their child. Only three parents reported a least liked part of the program and all said that it was the timing of the program and that participation was difficult due to busy schedules in the summer.

Parents and children were also asked questions related to reading frequency, interest in reading, and reading attitudes. All parents reported that this program increased their child's reading frequency, 64% reported that it increased their child's desire to read for fun, and 73% reported that it positively changed their child's attitudes towards recreational reading. When asked similar questions, 96% of children reported that the program made them read more, 60% said it made them want to read more for fun, and 91% said it made them enjoy reading more.

When asked if they would change the program in any way, 55% of parents and 41% of children offered suggestions for program modifications. Overall, parents made four suggestions: a) more time between books or fewer books given in total (36%), b) children should be given a choice of books to read (7%), c) the program should include a wider age range of children (5%), and d) parents should have the opportunity to meet with other participating parents for the duration of the study (5%). Children made two suggestions that were also voiced by their parents: a) children should be able to choose their books (23%), and b) more time between books or fewer books given in total (18%).

Finally, parents were asked whether this program helped their child in any other ways and 50% of parents responded affirmatively. For example, 18% of parents reported that this program helped their child in specific areas including, report writing, reading comprehension, vocabulary, fluency, and in one case their child's reading confidence. Moreover, 14% of parents said their child began discussing the books they were reading with friends and siblings and 9% said it helped build a reading routing in their home

during the summer. Parents also said this program helped introduce their child to new authors and different kinds of books that were of interest (5%) and made their child want to go to the library more often to find books from similar authors (5%). Overall, 91% of parents said they would participate in a similar study while only 46% of children said yes.

Control group questionnaire. To ascertain what reading habits children in the control group were undertaking during the summer a follow-up questionnaire was conducted (via telephone) with an adult in the household. All 28 participants completed the questionnaire where 89% of respondents was the child's mother, 7% their father, and in one case an aunt who lived in the home. Parents were asked how many books their child had read over the summer, how many hours their child spent reading each week, whether they encouraged their child to read books with siblings or other family members, and whether they read any books with their child in the summer. If parents reported reading with their child, additional questions assessing reading comprehension, vocabulary, and encouragement were asked.

From this, parents reported that their child read on average, 6 books over the summer and spent nearly two and a half hours reading per week. They also reported that they encouraged their child to read with siblings and other family members (46%) and 54% of parents said they read with their child. When asked how they read with their child, 32% said that they took turns reading with their child, 14% said their child did most of the reading, and 4% of parents reported doing most of the reading. Parents were also asked what reading comprehension, vocabulary, and encouragement strategies they used during shared reading with their child in comparison to strategies used in the intervention. From this, it was determined that 33% did not use any reading comprehension strategies utilized by the experimental group in the intervention; 53% of parents did not use any of

the vocabulary strategies, and 7% did not report engaging or encouraging their child during shared reading. Of the remaining 46% of parents who reported not reading with their child, 32% provided the following reasons for not doing so: (a) their child preferred to read independently (17%), (b) it was summer vacation (7%), and (c) parents were too busy (7%).

Findings from this survey indicated that parents encouraged their child to read as well as participated in shared reading with their child. Many parents, however, reported not using the comprehension or vocabulary building strategies that were in place for the children and parents in the *Book Reading Group.*

Reading preferences and encouraging children to read more. Children were given two questionnaires at the beginning of June, 1) the Reading Preferences Survey, and 2) the Make Me Read More Questionnaire (MMRMQ). The first was given to determine each child's reading preference in order to accurately match individual children to books of interest and the latter was to investigate what factors would make a child want to read more for pleasure. In keeping with research documenting gender differences in reading preferences, supplementary analyses were conducted on children's reading preferences. The percentage rates across 20 genres of reading are shown in Table 14 according to gender. One-way ANOVAS revealed significant gender differences in the preference for History/Geography Non-fiction favoring boys [$F(1, 56) = 5.22, p = .03$, $eta^2 = 0.09$], in the preference for Child/Family Non-fiction favoring girls [$F(1, 56) = 14.51, p = .001$, $eta^2 = 0.30$] as well as the preference for Poetry [$F(1, 56) = 15.35, p = .001$, $eta^2 = 0.22$] and Romance [$F(1, 56) = 16.49, p = .001$, $eta^2 = 0.23$]. No other differences were found across the remaining genres. These findings revealed that boys and girls still differ in their preference for certain reading material. Consequently, it is

important to consider personal preference when providing children with books to read. In the current study, children's individual preferences for reading material was attended to by providing children only with books reported to be of a genre they "Really like".

Children were also asked to complete a questionnaire aimed at exploring what factors would make them want to read more for pleasure. The questionnaire was comprised of 17 items that were divided across five categories (see Table 15). The majority of children reported that they would read more if they were given the choice of books/materials to read (91%), if their parents took them to a bookstore or library (77%), if they received a prize or reward for reading more (75%), if the book was a part of a series (75%), and if their Mom/Dad told them to read more (74%). The remaining items continued to decrease in their effectiveness to make children want to read more with teachers choosing books and materials for children to read coming last at just 26%.

Overall, intervention children the present research made significant gains in reading ability (i.e., passage comprehension, word identification, and oral reading fluency) as compared to the control children. Contrary to expectation no group differences were found for vocabulary or reading motivation. Treatment fidelity revealed that 86% of participants completed at least half of the eight-week book intervention (i.e., 4 books) and the implementation of strategies to promote reading comprehension, fluency, vocabulary, and reading engagement was very positive. Parents overwhelmingly reported using the various strategies more than half the time over the course of five weeks of the program. Moreover, parent and child feedback was very positive with 96% of parents and 86% of children reporting enjoying the program. Additionally, 96% of parents and 91% of children reported liking the books that were sent to them. Evaluation of the summer reading habits for the control group revealed that only half of parents

reported reading with their child and during these sessions did not report using the strategies being used by the *Book Reading Group.* Lastly, supplemental analyses revealed gender differences in the preference for certain types of reading genres. The implications of these findings are presented next.

Interim Discussion

The present summer book reading intervention targeted low achieving grade 3 and 5 children and attempted to improve their reading skills, oral language skills, and reading motivation. This was done by increasing their reading frequency via access to books that were both interesting and at an appropriate reading level for each student. In addition, the role of parents was paramount in this study as they were instructed to participate in paired-reading with their child and were trained to use specific reading comprehension strategies to improve text understanding, to discuss the book with their child, and to build vocabulary skills while at the same time improving oral reading fluency and increasing engagement in reading. It was predicted that at the end of the 8-week intervention children in the book reading group would exhibit greater reading frequency and improved reading ability, oral language skills, and reading motivation than children in the control group.

Upon completion of the intervention, children in the book reading group made significant gains in reading skills (i.e., a composite of passage comprehension, word identification, and oral reading fluency) compared to control children. This finding suggests that this intervention was predominantly sensitive to literacy based outcome skills. One reason why reading skills would be especially sensitive to this intervention is the nature of the strategies being applied. For instance, strategies to build reading comprehension have been found to be especially amenable to explicit teaching and

evidence suggests that teaching a combination of reading comprehension strategies is the most effective in promoting children's reading comprehension (Foorman et al. 2006; NRP, 2000). In line with these findings, the current intervention trained parents to utilize various reading comprehension strategies such as rereading, making predictions, asking questions, making connections, and summarizing the material being read. Examination of treatment fidelity revealed that 55% of parents in the book reading group reported using all six of the reading comprehension strategies for at least five weeks of the intervention. In stark contrast, only 54% of parents in the control group reported even reading with their child over the summer break and none of these parents used all six of the reading comprehension strategies. It seems then that the strategies employed in this intervention were parent friendly and amenable to training as evidenced by their consistent use by parents in the experimental group.

Moreover, parent modeling of correct reading behaviour during the paired-reading sessions with their child may have also contributed to children's acquisition and application of reading strategies to a greater extent. In a synthesis of extant literature, the National Reading Panel (2000) reported that guided repeated oral reading procedures have significant and positive impacts on word recognition, fluency, and comprehension across a range of grade levels. In addition, reading with a model has been found to be especially effective for lower-skilled readers than reading without a model (Chard, Vaughn, & Tyler, 2002). During shared reading the parent fosters the child's development by providing the scaffold necessary for the child to perform at their highest level and also serve as a model, teacher, and support for the child's efforts to read (Clarke-Stewart, 1998). Each of these components (i.e., listening to child read, shared reading, parent modeling of reading, and correction) are all recommended elements to be

included in parent training programs used to foster children's reading skills. In line with this recommendation the current intervention study incorporated each of these components.

Contrary to expectations, no group differences were evident for children's oral language skills. On its own, reading practice has been shown to be unreliable in promoting children's vocabulary growth so it has been recommended that more direct instruction be implemented when attempting to improve children's vocabulary skills (Pressley, Disney, & Anderson, 2007; Shany & Biemiller, 2009). With this in mind, the current study utilized three effective vocabulary building strategies supported in the literature including: (1) shared reading with word meaning explanations (Biemiller, 2003); (2) direct explanation of words; and (3) deriving the meanings of words based on the context of the sentence (Nash & Snowling, 2006). Parents were instructed to read aloud with their child in modified paired reading sessions providing word meaning explanations as needed. They were also encouraged to have their child identify five to ten unknown or unfamiliar words from each book with which they would find the meaning of together using contextual cues or the dictionary as an aid. Finally, books were matched to the child's reading level with the underlying rationale that books matched to difficulty level would present the child with reading material that was neither too easy nor overly frustrating for the child to read (Carver & Leibert, 1995; Davis, 1988). This is especially important as research indicates that children with weaker reading skills learn fewer words from reading compared to good readers because they choose to read easier material which offers little difficulty and limited vocabulary development (Carver & Leibert, 1995; Joshi, 2005).

Great efforts were made to incorporate effective vocabulary building strategies, but in this targeted sample of low achievers they did not yield reliable results as some children made gains and others did not. A possible explanation for such findings may be due to the level of exposure children had with novel words. In the present study, parents and children read one book per week leaving little opportunity for rereading entire books. Thus, children's exposure to novel words may have been minimal. Studies with younger children show that optimal improvements in vocabulary occur through multiple exposures with the target words (Sénéchal & Cornell, 1993). As a result, it may be the case that the children's exposure to new words was too fleeting and did not transfer to the standardized outcome measures being assessed. In addition, it is important to also consider the role of parents in improving children's oral language skills. In order for parents to define novel words encountered with their children while reading, they would need to know the meanings of the words. In the current research this occurrence was controlled for by providing parents with a list of novel words found in each book sent to their child, along with corresponding definitions for each word. As a result, the null findings found in this study for oral language skills speaks to the need for greater examination of effective strategies that parents can employ during shared reading with their children.

Finally, no significant group differences were evident for reading motivation, but children in the book reading group did exhibit lower scores for reading motivation than children in the control group. There are two possible explanations for this finding. First, this targeted sample of children was chosen based on their weak academic skills. Very often children who experience difficulty in reading will avoid reading in order to prevent further frustration. Such avoidance behaviours, however, cause them to fall even further behind their peers (Dreher, 2003). In a longitudinal study it was found that by the time

struggling readers reached fourth grade, only 5 out of 24 poor readers said they liked to read (Juel, 1988). Thus, participation in a reading intervention with their parents may have created the perception of being 'forced' to do something they already do not enjoy. Couple this resistance with the intervention taking place over 8-weeks during a time typically viewed as being a vacation from all things academic may have impacted their motivation and resulted in lower gains when compared to the control group where only half of parents reported reading with their child.

In this sample of weaker students, it may also be the case that reading motivation may improve only after they have sustained improvements in their reading achievement first. As a result, it is posited that in a similar sample of children it is imperative to first make improvements in their reading achievement. Creating opportunities for these students to succeed and develop confidence will no doubt create greater intrinsic reading motivation, positive reading self-concepts, and more positive attitudes towards reading. Research is in accord with this view and has shown that as children believe they are competent and efficacious readers they are more likely to engage in reading (Wigfield & Guthrie, 1997). Moreover, when a child perceives that they have the ability to accomplish a task they tend to perform at higher levels and have increased motivation to complete more challenging tasks (Eccles & Wigfield, 2002; Katzir, Lesaux, & Kim, 2009).

A second explanation of the null findings for reading motivation is the overlooked importance of children in the experimental group having a choice in selecting the books they received. Each of the books sent to the children were matched to the children's reported reading interests and ability. At post-test, however, it became evident through both child and parent feedback that children should be actively involved in choosing their

own books. Researchers argue that providing children with choice and control over their reading material enhances their involvement and engagement in reading (Ryan & Deci, 2000). Furthermore, having control over aspects of learning has been shown to lead to independent thinking, greater personal responsibility for the activity, and feelings of autonomy (Guthrie & Davis, 2003). Indeed, in a meta-analysis on the effects of choice on intrinsic motivation, Patall, Cooper, and Robinson (2008) found that across 41 studies, providing choice enhanced intrinsic motivation, task performance, and perceived competence. As a result, if children were permitted to choose their books they may be more likely to engage in the intervention and may view the experience in a more positive manner.

Results from the current summer book reading intervention with grade 3 and 5 children contribute to the extant literature in two ways. First, the findings corroborate past research on children's summer reading activity showing that increasing children's access to books over the summer is a cost effective strategy for increasing children's reading over the summer (Kim, 2006; Kim, 2007; Kim & Guryan, 2010; Kim & White, 2008). Second, the findings also corroborate the efficacy of using multiple reading comprehension strategies (i.e. reread, predict, ask questions, make connections, and summarize the material that they have read) through explicit teaching to improve children's reading skills (NRP, 2000).

The current study also makes unique contributions to the extant literature examining the effects of voluntary summer reading and access to books (Kim, 2006; Kim, 2007; Kim & Guryan, 2010; Kim & White, 2008). Kim's initial studies had three commonalities: (1) children were sent books matched to their interest and reading ability over the summer; (2) teachers played a significant role in teaching children the strategies

they would use over the summer while reading independently prior to the end of the school term; and (3) large samples of children produced very small effect sizes. In his third project, Kim began introducing parents into the study, albeit in a limited role and found his greatest effect sizes. In his most recent work, Kim and Guryan (2010) attempted to replicate past findings, but made three significant design changes that may have been cause for their null findings: 1) they selected a sample of children considered at-risk for reading failure (i.e. high poverty), 2) they added a parent training component, and 3) they allowed children to choose their own selection of books.

The current study was similar to Kim's in three respects: (1) a specific sample of children considered to be at-risk for reading failure was recruited; (2) children were sent books matched to their interest and reading ability; and (3) a parent training component was present. The present study differed from Kim's intervention research in a very important way, that is, the level of parent involvement. Most important, the present study yielded significant group differences not seen in Kim's work. Such differences might be due to the increased level of parental involvement in the present research. Parents were active partners in this summer book reading intervention acting to both guide their children during paired-reading exercises and also act as reading models for their children scaffolding their reading attempts. The increased parent involvement may have provided these struggling readers with a source of consistent support over the duration of the entire intervention. In contrast, this responsibility fell to teachers in Kim's work because teachers instructed the children on the necessary skills prior to the end of the school term and children were left to use the strategies on their own over the summer. Arguably, diluted teacher effects may be the cause for Kim's lack of findings whereby only some of the children continued to utilize strategies they learned in the weeks before school ended.

Moreover in the present study, researchers provided parents with weekly support via telephone calls to ensure treatment fidelity and to resolve or discuss any difficulties being experienced. As a result, parents were providing their children with reading support over the summer, they too were provided with support from the researchers.

In addition to having increased parental involvement and targeting a sample of poor achievers, the current study also incorporated multiple measures of achievement and motivation. For instance, three facets of reading ability were measured (i.e. passage comprehension, word identification, and oral reading fluency), two oral language measures were used (i.e. receptive and expressive vocabulary), and three facets of reading motivation were assessed (i.e. intrinsic motivation, reading self-concept, and attitudes towards reading). It is argued that incorporating multiple measures of constructs is recommended in order to improve the reliability of the study (Baron & Kenny, 1986).

Finally, the present study contributes to literature on children's reading by providing greater insight into children's summer reading activity as well as documenting the efficacy of parents in a training role. It is evident that parents play a significant role in fostering their children's reading habits, but additional research could also examine the benefits of the current program in promoting family literacy as a whole. From a family literacy perspective parents may also benefit from such programs and examination of this is warranted.

Furthermore, the current study supports the use of multiple reading comprehension strategies to improve poor readers reading ability. It is still not clear, however, if all or only one of the taught strategies is effective in fostering children's reading comprehension. Further research is warranted to delineate the effects of each strategy as well as examine the effects of other reading comprehension properties

including inference ability, narrative skills, and working memory (Cain, 2003; Oakhill & Cain, 1997; 2000).

Lastly, additional follow-up testing is needed to investigate whether the current intervention program has sustainable and lasting effects. To this end, it would also be interesting to evaluate the children after returning to school to see whether these children eventually catch up to their peers or if they continue to do poorly in reading. Moreover, parents and children reported that the program was too long and suggested lessening the number of weeks required. As a result, further research could investigate the effects of the program at a reduced length.

Overall, these findings have implications for summer programming and intervention programs designed for poor achievers. The *summer slide* where children experience a loss in learning is especially detrimental to poor achievers and has prompted extensive summer remedial programs and discussion in support of year-round schooling. The current study, however, utilized a cost effective strategy for increasing children's reading over the summer in comparison to standard summer remedial programs and trained parents to use easy and effective strategies to build reading ability, oral language skills, and reading motivation while they actively read with their children. This study shows that providing access to books and maximizing the role of parents can serve as effective methods in improving poor achiever's literacy skills over the summer. Additional research is warranted to test the sustainability of findings across samples, but overall the results are promising.

VII. General Discussion and Conclusions

Positive relations between the frequency of reading and subsequent literacy-related outcomes are consistently found in the literature, thus highlighting the importance

of fostering more positive reading habits at an early age. In fact, many community programs specifically target parents and children in an effort to increase recreational reading and employ strategies to improve component processes of reading skills (Ottawa Public Library, 2010). From this, the widely held tenet that skill development of any kind is accelerated through practice is evident and in terms of reading means that increased exposure to print facilitates greater growth in reading skills (Echols et al., 1996). Specifically, younger children can develop increased word reading skills through exposure to print which leads to greater orthographic representations of words which then facilitates children's spelling ability (Echols et al., 1996). Further, with increased reading frequency, children are exposed to a greater selection of rare and novel words not usually encountered in oral speech, which leads to greater oral language skills and vocabulary knowledge (Sénéchal, LeFevre, Hudson, & Lawson, 1997).

In the current research, two studies were conducted examining children's reading for pleasure. In Study 1 the benefits of reading for pleasure were examined through a posited mediated model of children's literacy performance. The model incorporated multiple factors predicted to be influential in children's literacy performance including: (1) children's home literacy environment; (2) reading motivation; and, (3) reading exposure. According to the model, the association between children's home literacy environment and reading motivation and child outcomes (i.e. vocabulary, spelling, and reading ability) is mediated through children's reading exposure.

One objective of this first study was to test the validity and accuracy of this proposed model. As predicted, children's reading exposure was a significant predictor of all child outcomes. In addition, reading exposure completely mediated the relation between children's home literacy environment and their reading, vocabulary, and spelling

skills. Contrary to expectation, however, was the finding that children's reading exposure was not a complete mediator in the relation between children's reading motivation and their reading and spelling skills. As a result, the direct relations found between reading motivation, spelling, and reading ability oppose earlier ideas that posit that reading motivation is indirectly predictive of achievement through its positive and predictive relation with reading amount. Instead, the findings suggested that children's reading motivation plays a much greater role in children's reading and spelling ability than first thought. It may be the case that reading exposure provides experience and practice, but reading motivation somehow optimizes the learning that occurs during those experiences. Future research is warranted to examine this relation further.

A second objective was to examine predicted grade and gender differences for children's reading exposure and reading motivation. Based on the extant literature it was expected that girls would report greater reading frequency and motivation than boys. Moreover, it was predicted that younger children would report reading more and have greater reading motivation than older children. Contrary to expectation, however, no significant gender or grade differences were found. A possible explanation may be due to the study's sample size and subsequent lack of statistical power, but future research is warranted to investigate other possibilities further.

Lastly, Study 1 was innovative in its examination of the multidimensionality of children's reading motivation and showed statistical support for the amalgamation of intrinsic reading motivation, reading self-concept, and reading attitudes in future studies of children's reading motivation. In addition, Study 1 examined the role of parents in motivating their children to read for pleasure. Parents were asked to report whether they did anything to motivate their child to read for pleasure and parents who responded

affirmatively were asked to provide details about the types of methods used to motivate their child. This initial attempt to record parents' role in encouraging their children to read was novel in itself and highlights the continued influence parents have in their child's reading habits.

Upon delineating the concepts and constructs associated with children's reading exposure, achievement, motivation, and home literacy environment in Study 1, the second study then capitalized on these constructs to design a parent based reading intervention geared towards supporting and fostering children's reading achievement over the summer. In Study 2, poor achieving children from Study 1 were selected to participate with their parents. The goal was twofold: (1) increase children's access to print by providing them with books matched to their reading level and interest; and, (2) train parents to use specific strategies to improve children's reading comprehension, oral language skills, and motivation to read. Findings suggested that this program was effective in building children's literacy related skills, but additional research is needed to explore strategies that would reliably foster oral language skills and reading motivation. Moreover, findings suggested that parents are effective participants in their children's learning and as such it is recommended that they continue to be involved in similar home based intervention strategies.

Finally, Study 2 also speaks to the effects of summer vacation on children's academic ability and revisits the concept of the *summer slide*, which is reported to be especially detrimental to poor achievers. In this study, sending books to children over the summer vacation and involving parents seems to have had a positive effect in promoting gains for children's reading ability. Arguably, this method is both cost effective and more

enjoyable than traditional summer remedial programs and as such follow-up studies should attempt to replicate its findings.

Overall, the present research shed light on the continued importance of studying children's reading frequency and habits. It also highlights a number of other noteworthy findings including: (1) the multi-dimensionality of children's reading motivation; (2) the relation of children's early home literacy environment to their later achievement; (3) the effects of summer vacation on poor achiever's reading ability; and perhaps most importantly, (4) the positive role parents play in motivating their children to read more for fun and the positive effects of their involvement in their children's reading habits.

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Appendix A: Parent Questionnaire about Children's Home Literacy Environment and Reading Activity

The parent (guardian) who is **most knowledgeable about your child's reading habits** should answer the questions below. Your answers will be kept confidential and used for research purposes only. You can choose not to answer any question. It will take you approximately 5 minutes to complete these questions.

Please indicate:

1. Child's birth date (Day/Month/Year): _____ Gender: _____boy ____girl
2. Your relationship to the child: _____mother ____father ____Other, please specify: _____
3. The language(s) your child can speak: ____ English ____ French ____Other, please specify: _____
4. The language(s) your child speaks most often: ____ English ____ French ____Other, please specify:__
5. The language(s) you and your spouse (if applicable) speak in the home:
a) Yourself: _____ English _____ French _____ Other, please specify: _____

b) Your spouse: _____ English _____ French _____ Other, please specify: _____

6. Please indicate **your** highest level of education & your **spouse's** highest level of education (if applicable)

____Less than High School
____High School
____College
____Undergraduate University degree
____Post-graduate degree

____Less than High School
____High School
____College
____Undergraduate University degree
____Post-graduate degree

7. Please indicate your approximate yearly family income:

____0- 20 000 ____20 001-40 000 ____40 001-60 000 ____60 001-80 000 ____More than 80 000

8. Please indicate how well your child is doing in school:

____Mostly A's ____Mostly B's ____Mostly C's ____Mostly D's _____Failing

CHILD READING ACTIVITIES. For most questions, please circle the number you think best describes your child's behaviour.

1. If you read to your child prior to grade 1, at what age did you start reading storybooks to/with your child? _____

2. To the best of your recollection, how frequently did you read to your child prior to grade

0	1	2	3	4
Never	Rarely	Sometimes	Often	Very often

3. Please estimate the number of children's **books in English that are available in the household.**

0	1	2	3	4	5	6
No books	1-20 books	21-40 books	41-60 books	61-80 books	81-100 books	**More than 101**

4. My child goes to the library to look at and/or borrow books in English.

0	1	2	3	4
Never	Rarely	Sometimes	Often	Very often

5. When you or your child go to the library, how many English children's **books do you or your child borrow on average?** _____

6. How many hours of reading for pleasure **does your child do in a typical week?**

0	1	2	3	4
0	1-2 hours	3-4 hours	5-6 hours	More than 6 hours

7. How many hours of television does your child watch in a typical day**?**

0	1	2	3	4
0	1-2 hours	3-4 hours	5-6 hours	More than 6 hours

8. How many hours on the computer does your child spend in a typical day**?**

0	1	2	3	4	0
0	1-2 hours	3-4 hours	5-6 hours	More than 6 hours	0

9. How would you rate your child's interest **in reading?**

0	1	2	3	4
Not Interested in reading	Rarely Interested in reading	Sometimes Interested in reading	Often Interested in reading	Very Often Interested in reading

10. How would you rate your child's attitude **towards reading?**

0	1	2	3	4
Very negative	Negative	Indifferent	Positive	Very positive

11. How would you rate your child's overall reading ability?

0	1	2	3	4
Well below average	Slightly below average	Average	Slightly above average	Well above average

12. **Do you do anything to motivate your child to read for pleasure? _____yes ____no.**

If yes, what things do you do to motivate your child to read for pleasure?

_____

_____

_____

_____

_____

_____

_____

_____

Once completed, please place the form and the questionnaires in the envelope provided, seal it, indicate on it whether permission is granted, and return it to your child's teacher as soon as possible. Thank you.

Appendix B: Adult Book Author Checklist (AAC)
(correct answers are in bold print)

INSTRUCTIONS (please read carefully):

Below is a list of 60 names. Some of the people on the list are popular writers (of books, magazine articles, and/or newspaper articles) and some are made up. You are to read the names and put a check mark next to the names of those individuals whom you know to be writers. Do not guess, but only check those whom you know. Please answer without stopping to verify the books in your home. Please respond without consulting with your spouse.

_____**Barbara Amiel**
_____Jonathan Anderson
_____**Isaac Asimov**
_____**Margaret Atwood**
_____**Jean Auel**
_____**James Baldwin**
_____Paul Bertelson
_____**Pierre Berton**
_____**Judy Blume**
_____Bertram Bruce
_____**Anthony Burgess**
_____Brian Byrne
_____**Edgar Rice Burroughs**
_____**Barbara Cartland**
_____**Arthur C. Clarke**
_____**James Clavell**
_____**Robertson Davies**
_____Gerald Duffy
_____Emilia Ferreiro
_____**Timothy Findley**
_____**Ian Fleming**
_____**Allan Fotheringham**
_____**Dick Francis**
_____**Stephen J. Gould**
_____Vincent Greany
_____**Andrew Greeley**
_____Colin Harrison
_____**S. E. Hinton**
_____**Erica Jong**
_____Michael Kamil

_____**Stephen King**
_____Charles Kinzer
_____**Judith Krantz**
_____**Louis L'Amour**
_____**Stephen Leacock**
_____**Robert Ludlum**
_____Ingvar Lundberg
_____**Colleen McCullough**
_____Margaret McKeown
_____**James Michener**
_____**Peter C. Newman**
_____Tom Nicholson
_____Jerome Niles
_____**Michael Ondaatje**
_____Charles Perfetti
_____Pieter Reitsma
_____**Sidney Sheldon**
_____Keith Stanovich
_____**Danielle Steel**
_____Elizabeth Sulzby
_____**David Suzuki**
_____**Paul Theroux**
_____**Alvin Toffler**
_____**J. R. R. Tolkien**
_____Renate Valtin
_____**Alice Walker**
_____**Irving Wallace**
_____Joanna Williams
_____**Tom Wolfe**
_____**Bob Woodward**

Appendix C: Children's Book Author Checklist (CBA)
(correct answers are in bold print)

INSTRUCTIONS (please read carefully):
Below you will see a list of 40 names. Some of the people on this list are popular writers of children's books and some are made up. You are to read the names and put a check next to the names of those individuals whom you know to be popular children's book writers. Do not guess, but only check those whom you know.

_____**Helen Dunmore**
_____**Roald Dahl**
_____**Megan Mcdonald**
_____Lois Sauer
_____**D.J. Machale**
_____**Erin Hunter**
_____Thomas Turner
_____**Beverly Cleary**
_____H.T. Fillmore
_____**Donald T. Sobol**
_____**Betsy Byars**
_____**Roy Macgregor**
_____Sidney Rauch
_____**Jean Fritz**
_____Frank Guszak
_____**Judy Blume**
_____**Scott O'Dell**
_____**Katherine Paterson**
_____Arnold Burron
_____ **Lemony Snicket**

_____J. Harlan Shores
_____Rita Klosterman
_____**Chris Van Allsburg**
_____Kenneth Dulin
_____**C.S Lewis**
_____**Thomas Rockwell**
_____Donald Lashinger
_____Lewis Smith
_____ **J. K. Rowling**
_____H.P. Daniels
_____Hilda Taba
_____**Cornelia Funke**
_____**Susan Cooper**
_____**Jenny Nimmo**
_____Sara Lundsteen
_____**John D. Fitzgerald**
_____**Lois Lowry**
_____Joanne Vacca
_____**Judy Blume**
_____**Scott O'Dell**

Appendix D: Children's Book Title Checklist (CBT)
(correct answers are in bold print)

INSTRUCTIONS (please read carefully):
Below you will see a list of 40 titles. Some of these are titles of popular children's books and some are made up. You are to read the titles and put a check next to those titles which you know to be titles of children's books. Do not guess, but only check those you know.

_____**Ingo**

_____**Call of the Wild**

_____He's Your Little Brother!

_____Katie of Norway

_____**Heidi**

_____**Rapunzel**

_____It's My Room

_____**Freedom Train**

_____**Ramona the Pest**

_____**The Magician's Nephew**

_____Football Freaks

_____Sadie goes to Hollywood

_____**A Wrinkle in Time**

_____**The Trumpet of the Swan**

_____The Schoolhouse

_____**The Cat Ate My Gymsuit**

_____**Nothing's Fair in Fifth Grade**

_____A Cricket in Times Square

_____**Greenwitch**

_____**Judy Moody**

_____**Hatchet**

_____The Lost Shoe

_____**Tales of a Fourth Grade Nothing**

_____Hot Top

_____**Island of the Blue Dolphins**

_____Joanne

_____**Superfudge**

_____The Missing Letter

_____**The Boxcar Children**

_____Secret Cottage in Riverside Wood

_____Joshua Johnson

_____**Charlie Bone and the Hidden King**

_____Melvin Meets the Moonlight Monsters

_____The Legend of Sean O'Toole

_____**The Yearling**

_____**A Light in the Attic**

_____**The Thief Lord**

_____The Time Grandpa found an Alien

_____ **The Pilgrims Of Rayne**

_____ **Warriors: The Lost Warrior**

Appendix E: Children's Reading for Pleasure Questions

1. How often do you read English books for fun at bedtime **in a typical week? Please circle the number you think best describes your behaviour. Choose a number from 0 to 7, where 0 means never and 7 means seven times a week.**

0	1	2	3	4	5	6	7
Never	1 time a week	2 times a week	3 times a week	4 times a week	5 times a week	6 times a week	7 times a week

2. How often do you read English books for fun at other times **in a typical week? Please circle the number you think best describes your behaviour. Choose a number from 0 to 7, where 0 means never and 7 means seven times a week.**

0	1	2	3	4	5	6	7
Never	1 time a week	2 times a week	3 times a week	4 times a week	5 times a week	6 times a week	7 times a week

If more than 7 times a week, please specify:

_____

Appendix F: The Motivation for Reading Questionnaire (MRQ) Test Items

Curiosity subscale (6 items)

1. If the teacher discusses something interesting I might read more about it
2. I have favorite subjects that I like to read about
3. I read to learn new information about topics that interest me
4. I read about my hobbies to learn more about them
5. I like to read about new things
6. I enjoy reading books about people in different countries

Involvement subscale (6 items)

1. I read stories about fantasy and make believe
2. I like mysteries
3. I make pictures in my mind when I read
4. I feel like I make friends with people in good books
5. I read a lot of adventure stories
6. I enjoy a long, involved story or fiction book

Challenge subscale (5 items)

1. I like hard, challenging books
2. If the project is interesting, I can read difficult material
3. I like it when the questions in books make me think
4. I usually learn difficult things by reading
5. If a book is interesting I don't care how hard it is to read

Very different from me	A little different from me	A little like me	A lot like me
1	2	3	4

Appendix G: The Reading Self-Concept Scale (RSCS) Test Items

Competence subscale

1. Can you work out what a story means?
2. Can you work out hard words by yourself when you read?
3. Is work in reading easy for you?
4. Are you good at remembering words?
5. Is it easy for you to read new words?
6. Are you good at correcting mistakes in reading?
7. Can you work out sounds in words?
8. Do you learn things quickly in reading?
9. Do you think you read well?
10. Can you work out hard words in a story even if there are no pictures?

NO: Never	NO: Not usually	Child understands sentence but is unsure	Yes: Usually	Yes: Always
1	2	3	4	5

Appendix H: Elementary Reading Attitude Survey (ERAS) Test Items

Recreational attitude subscale

1. How do you feel when you read a book on a rainy Saturday?
2. How do you feel when you read a book in school during free time?
3. How do you feel about reading for fun at home?
4. How do you feel about getting a book for a present?
5. How do you feel about spending free time reading?
6. How do you feel about starting a new book?
7. How do you feel about reading during summer vacation?
8. How do you feel about reading instead of playing?
9. How do you feel about going to a bookstore?
10. How do you feel about reading different kinds of books?

Appendix I: Descriptive Statistics from Study 1 Showing no Grade or Gender Differences on Standardized and Questionnaire Measures

Table I1

Study 1: Descriptive Statistics for Outcome Measures Showing no Differences in Performance

Across Grade or Gender

	Grade		Gender	
	3	5	Girls	Boys
Variable	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
Achievement				
Expressive Vocabulary[a]	96.75	95.43	96.61	95.60
	(13.97)	(10.25)	(13.07)	(11.50)
Receptive Vocabulary[a]	102.67	105.11	104.58	103.09
	(12.75)	(10.30)	(11.34)	(12.01)
Spelling[a]	99.00	98.48	99.97	97.49
	(14.39)	(13.28)	(12.07)	(15.41)
Passage Comprehension[a]	103.77	97.67	101.83	99.77
	(9.67)	(9.32)	(10.19)	(9.67)
Word Identification[a]	104.83	99.98	103.00	101.96
	(11.41)	(11.58)	(11.49)	(11.99)
Reading Motivation				
Intrinsic Motivation[b]	50.14	49.98	49.55	50.60
	(9.71)	(9.05)	(10.03)	(8.66)
Reading Self-concept[c]	37.28	39.43	38.10	38.54
	(7.88)	(6.92)	(7.23)	(7.79)
Reading Attitude[d]	29.78	30.07	31.29	28.51
	(6.21)	(5.28)	(4.95)	(6.22)
Control variables				
Math Achievement[a]	95.43	92.55	93.81	94.28
	(11.96)	(9.81)	(10.85)	(11.29)

[a]Standard scores with means of 100; N = 116
[b]Self-report questionnaire; Max score = 68
[c] Self-report questionnaire; Max score = 50
[d] Self-report questionnaire; Max score = 40

Appendix I: Study 1 Descriptive Statistics Showing no Grade or Gender Differences on Standardized and Questionnaire Measures

Table I2

Study 1: Descriptive Statistics for Questionnaire Measures Showing no Differences in Performance across Grade or Gender

	Grade 3				Grade 5			
	Girls		Boys		Girls		Boys	
Variable	*Median*	*Range*	*Median*	*Range*	*Median*	*Range*	*Median*	*Range*
Literacy experiences								
Reading frequency at bedtime[a]	4.0	0-7	4.0	0-7	4.5	0-7	4.0	0-7
Reading frequency at other times[b]	4.0	0-8	4.0	0-8	4.5	0-8	3.0	0-8
Child frequency of reading for pleasure per week[c]	2.0	0-4	2.0	0-4	2.0	0-4	2.0	0-4
Child goes to library to borrow books[d]	2.0	0-4	2.0	0-4	2.0	0-4	2.0	0-4
Age onset of shared reading with parent[e]	3.0	1-7	2.0	1-7	3.0	1-7	3.0	1-7
Frequency of shared reading prior to Gr1[d]	3.0	0-4	3.0	0-4	3.0	0-4	4.0	0-4
No. of children's books in the home[f]	4.0	0-6	5.0	0-6	5.0	0-6	5.0	0-6
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
No. of books borrowed from library	3.11	2.13	3.09	2.38	2.68	1.81	3.00	2.71
Other Child Activities	*Median*	*Range*	*Median*	*Range*	*Median*	*Range*	*Median*	*Range*
No. daily TV hours watched by child[c]	1.0	0-4	1.0	0-4	1.0	0-4	1.0	0-4
No. daily computer hours by child[c]	1.0	0-4	1.0	0-4	1.0	0-4	1.0	0-4
	%	*SD*	*%*	*SD*	*%*	*SD*	*%*	*SD*
Child Book Title Checklist[g]	1.15	13.72	4.43	16.05	27.79	19.42	11.54	14.11
Child Author Checklist[g]	10.85	12.43	12.77	11.53	27.57	18.27	15.49	13.57
Adult Book Author Checklist[g]	27.41	23.92	31.28	22.63	40.08	24.83	31.63	16.73

[a]Child Report; 8-point scale: 0 (never), 1 (1 time per week)…7 (7 times per week) ; [b]Child Report; 9-point scale: 0 (never), 1 (1 time per week)…8 more than 7 times per week); [c] Parent Report; 5-point scale: 0 (0 hours), 1 (1-2 hours), 2 (3-4 hours)...4 (6+hours); [d]Parent Report; 5-point scale: 0 (never), 1 (rarely), 2 (sometimes), 3 (often), 4 (very often); [e]Parent Report; 7-point scale: 1 (before birth), 2 (birth-6mth), 3 (7mth-1yr), 4 (1 yr+)...7 (don't remember); [f]Parent Report; 7-point scale: 0 (0 books), 1 (1-20), 2 (21-40)...6 (more than 101); [g]Reported are mean percentages of correct answers selected corrected for foils; [h]Reported are percentages of positive parent responses; [i]Reported are mean number of methods from 5 possible sources; N = 116

Appendix J: Tables J1-J4 Showing Zero-order Correlations among Variables in each Composite Measure

Table J1

Study 1: Zero-order Correlations among Variables that Comprise the Reading Exposure Construct

Variable	1	2	3	4
1. Reading for Pleasure (Parent Report)	--			
2. Reading for Pleasure (Child Report)	.42**	--		
3. Child Book Author Checklist	.33**	.19*	--	
4. Child Book Title Checklist	.49**	.15	.43**	--

* $p = 0.05$; ** $p = 0.01$

Table J2

Study 1: Zero-order Correlations among Variables that Comprise the Home Literacy Environment Construct

Variable	1	2	3	4
1. Number of Children's Books in the Home	--			
2. Age Onset of Shared Reading	.23*	--		
3. Frequency of Shared Reading (Prior to Gr.1)	.50**	.31**	--	
4. Parent Motivates Child to Read for Pleasure	.11	.25**	.12	--

* $p = 0.05$; ** $p = 0.01$

Table J3

Study 1: Zero-order Correlations among Variables that Comprise the Reading Motivation Construct

Variable	1	2	3
1. Intrinsic Reading Motivation	--		
2. Reading Self-Concept	.63**	--	
3. Reading Attitude	.38**	.42**	--

* $p = 0.05$; ** $p = 0.01$

Appendix J: Tables J1-J4 Showing Zero-order Correlations among Variables in each Composite Measure

Table J4

Study 1: Zero-order Correlations among Variables that Comprise the SES Construct

Variable	1	2	3
1. Parent Education	--		
2. Family Income	.41**	--	
3. Parent Print Exposure	.48**	.26**	--

* $p = 0.05$; ** $p = 0.01$

Appendix K: Tables K1 & K2 Showing Sample Distribution According to Age, Grade, Gender, and Experimental Group for Study 2

Table K1

Study 2: Sample Distribution of Age and Grade According to Experimental Group

	Mean Age in Months	
	Experimental Group	Control Group
Grade 3	104.40	105.67
Grade 5	130.15	127.71

N = 57

Table K2

Study 2: Sample Distribution of Gender and Grade According to Experimental Group

	Experimental Group		Control Group	
	Girls	Boys	Girls	Boys
Grade 3	7	8	8	7
Grade 5	5	8	5	9

N = 57

Appendix L: Oral Reading Fluency (Grade 3)

Grade 3 Fluency Test Blackline Master

13 The sun was out for the first time in a week, and it
25 made Lara not want to go to school. She put a steaming
37 wet cloth on her head and told her dad she was sick.
48 "You do feel sick," Dad said. She tried hard to make
58 her voice sound scratchy. "You sound sick, too," he said.
69 Then Lara found out that Dad would be working at home
82 all day, so she had to stay inside and rest. Lara read and
90 slept a bit, but mostly she was bored.
100 Her friends Suki and Marcos stopped by on their way
110 home from school. "We had the best day," Suki said,
118 beaming. "We were outside almost the whole time."
126 "We measured things in the playground and studied
136 different kinds of trees. We even ate lunch under the
139 trees," Marcos added.
149 Lara frowned. She wished she could go back to that
157 morning, because she would have made some different
158 choices.

Student's Name: _____ **Date:** _____

Speed/Accuracy: WCPM score calculation

Total Words Read Per Minute	Total Number of Errors	Words Correct Per Minute (WCPM)

Observations: Level Rank (circle one)

Level 4
Level 3
Level 2
Level 1

Appendix L: Oral Reading Fluency (Grade 5)

Grade 5 Fluency Test Blackline Master

8 A shrewd farmer and her neighbor had been
18 longtime rivals. But because they lived next door to one
27 another, they sometimes helped each other. It should be
37 said that they really only pretended to help each other,
49 just in case one really did need the other's help one day.
57 One spring the foes planted carrots together, agreeing
70 to divide the crop. The neighbor had a plan to get it all
79 at harvest. Believing all crops grow above ground, he
89 persuaded the farmer to give him the green tops. The
98 farmer happily went along. Then she took the carrots
106 from the ground. Next they planted cucumbers. Learning
116 from the carrot incident, the neighbor decided to ask for
125 everything under the ground. The farmer smiled as she
133 picked the cucumbers growing above the ground and
142 left her outraged neighbor the roots. Determined to get
152 even, the neighbor agreed to raise corn with the farmer
162 if he could have both what grew above and below
172 ground. But at harvest time, the farmer removed the ears
183 and left the neighbor the stalks and roots. That was the
188 neighbor's last attempt at farming.

Student's Name: _____ **Date:** _____

Speed/Accuracy: WCPM score calculation

Total Words Read Per Minute	Total Number of Errors	Words Correct Per Minute (WCPM)

Observations: *Level Rank (circle one)*

Level 4
Level 3
Level 2
Level 1

Appendix M: Children's Reading Preferences Survey

Below is a list of different book topics. Put a check mark in the box that best shows how you feel about each topic (ie: I don't like it; It's okay; I like it; or I really like it). There are no right or wrong answers so answer honestly how you feel about each book topic.

Topic	I Don't like it! 	It's Okay 	I Like it 	I Really Like it! 
1. Adventure (Fiction) (i.e: Harry Potter)				
2. History/Geography (Non-Fiction)				
3. Animals (Non-Fiction) a. Mammals b. Marine Life c. Reptiles	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____
4. Children/Family (Non-Fiction)				
5. Sports a. biographies b. fiction	a.____ b.____	a.____ b.____	a.____ b.____	a.____ b.____
6. Humor				
7. Science (Non-Fiction) a. earth science b. space c. technology	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____
8. Fantasy a. science-fiction b. time travel c. supernatural (ghosts, magic, monsters)	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____	a.____ b.____ c.____
9. Travel (Non-Fiction)				
10. Poetry				
11. Romance				
12. Traditional Literature (ie: Fables, myths, legends)				
13. Mystery				
Other Topics?				

Appendix N: Make Me Read More Questionnaire

Below is a table with 3 columns. In the first column are ideas that might make you want to read more. Put a checkmark in the YES column if you think that they WOULD make you want to read more. If you think they WOULDN'T make you read more then put an X under the NO column. If there is something that would make you want to read more and it is NOT on this list then add it next to #18.

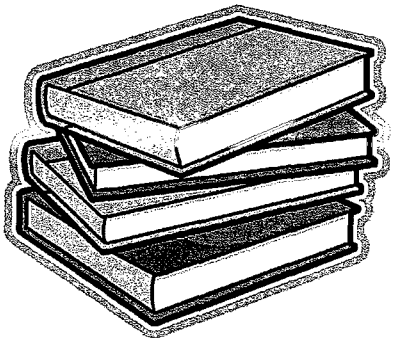
I would read more if...	Yes	No
1. My teacher told me to read more		
2. I saw that they made the book into a movie		
3. The book is challenging to read		
4. My mom/dad told me to read more		
5. The books were about my hobbies or interests		
6. The book has pictures		
7. My mom/dad bought me books or took me to a bookstore/library		
8. My teacher chose books for me to read		
9. I got a present/reward/prize for reading more books		
10. My mom/dad told me that I am a good reader		
11. I chose my own books		
12. I saw my mom/dad reading their own book		
13. My teacher told me I am a good reader		
14. The book was part of a series		
15. I had more books at home		
16. My friends said it was a good book		
17. The book was really easy to read		
18. OTHER THINGS THAT WOULD MAKE ME WANT TO READ MORE?		

Appendix O: Child Postcard (Book Reading Group)

POST CARD WEEK#1

HOORAY--IT'S SUMMER TIME! My name is Stephanie and for the next 8 weeks I will send you a postcard in the mail every week. I will remind you how important it is to keep reading even when you're on your summer vacation. When reading a good book you can make good friends and visit far away places. You can also learn about your favourite animals, things that happened long ago, or about your favourite hobbies. The possibilities are endless!!

So, keep reading! I'll talk to you soon



Stephanie ☺

Appendix O: Child Weekly Progress Report (Book Reading Group)
(on blue paper)

Please fill out the questions on this postcard that came with your new book this week. When you are done, remember to mail it back to me. Just drop it off in a mailbox or have your parent(s) send it back to me. Every week you must remember to send this BLUE postcard back to me.

TITLE OF
BOOK:_____

DID YOU READ THIS BOOK? (check Yes or No): YES_____ NO_____

DID YOU LIKE THIS BOOK? (check Yes or NO): YES_____ NO_____

HOW MANY BOOKS HAVE YOU READ THIS SUMMER? _____

HOW MANY HOURS DID YOU READ THIS WEEK? _____

What did you do to better understand this book? (check all that apply)

____I re-read parts of this book

____I asked questions about this book

____I made predictions about this book

____I summarized parts of the book

Now, choose a favourite part of the book and read it aloud to one of your family members. Once you finish reading it out loud be sure to have an adult sign the bottom of this page.

Yes, a 100-word passage was read aloud to me from this book:

Adult Signature: _____

Appendix P: Book Summary for Parents

ID#24: Book #1: Geronimo Stilton: The Mysterious Cheese Thief

Summary:

Geronimo and his family take a trip to England to see where *Stilton* cheese is made. When they get there they find that all the *Stilton* cheese has been disappearing from the stores. It's up to Geronimo to find out who the mysterious cheese thief is, but can he do it? What an adventure.

Vocabulary:

Page	Word	Definition
3	Stammered	to make involuntary stops and repetitions in speaking
8	Obnoxious	very unpleasant or rude
9	Famished	to be very hungry
26	Devoured	to eat up greedily or ravenously
29	Humiliating	something that is extremely embarrassing
42	Notorious	well known and talked about
46	Hygiene	the degree to which people keep themselves/their surroundings clean
52	Deserted	If a place is deserted, there are no people in it
66	Cascaded	a large amount of something which hangs down
72	Flattered	to feel very pleased and proud because someone has said good things about you or has made you feel important

Comprehension:

Pg 5: Geronimo has been told he cannot use his last name anymore. What do you think will happen?

Pg 9: Geronimo's cousin Trap wants to be a "cheeseologist". What is a cheeseologist and why do you think he wants to be one?

Pg 24: How did Geronimo and his family get to England?

Pg 25: What happens when they order Stilton cheese at the restaurant?

Pg 30: What happens when they try to find Stilton cheese at the grocery store?

Pg 30: Who do you think is stealing all the cheese?

Pg 34: What do you think about Geronimo's cousin, Trap?

Pg 62: It looks like the Shadow stole all the cheese in order to build a cheese-house. Where were the 3 places she stole the Stilton cheese from? [1) restaurant, 2) grocery store, 3) cheese factory]

Pg 72: Who is Sally Ratmousen? Why do Geronimo and Sally not get along?

Pg 76: Oh, no! The Shadow knocked Geronimo out with a hammer. What do you think will happen next? Do you think Geronimo's family will find him?

Pg 111: What happens at the end of the story?

If you liked this book, here are similar books you could read:

1. Invisible Stanley by Jeff M. Brown

   Summary: One morning, after a terrible storm, Stanley Lambchop is nowhere to be found. His family can hear him, and there is a lump under his covers, but no one can find him! Just where is that boy? Then they discover the truth -- Stanley is invisible! At first, Stanley is very busy. There's so much for an invisible boy to do. But will he stay that way forever?

2. Aliens for Breakfast by Jonathan Etra & Stephanie Spinner

   Summary: It's been ten years since Richard Bickerstaff sat down to breakfast and an alien climbed out of his cereal bowl! Join Richard and Aric, a tiny, wisecracking creature from the planet Ganoob, as they battle to save the world from evil aliens.

Appendix P: Parent Weekly Postcard (Book Reading Group)
(on green paper)

Dear Parents;

This is just a reminder to encourage your child to read over the summer. Your child will receive 2 postcards per week. One encourages them to read over the summer and the other asks them questions about the book that was sent to them. Your child is also asked to read a 100-word passage from the book aloud to you. At the bottom of the BLUE postcard, there is space for your signature to say your child has read aloud to you. Once this BLUE postcard is complete it must be sent back to the researcher. Postage is paid so please drop it off into a mailbox.

We thank you for your involvement in this study! It is important for children to keep reading during the summer!

Sincerely,

Stephanie Pagan, PhD Candidate
Carleton University

Appendix P: Parent Weekly Progress Report (Book Reading Group): (on green paper)

Please return by: _____(a telephone call will follow if not returned by this date)

Book Title: _____

How much of this book did you read with your child during paired reading?
a. the whole book
b. about half the book
c. a few pages/couple of chapters
d. none
e. other comment:_____

How many minutes per day did you spend reading this book with your child?
a. 5 minutes
b. 10 minutes
c. 15 minutes
d. 20 minutes
e. more than 20 minutes

Place a checkmark in the column to the right if you used the given technique

FLUENCY		
1	I listened to my child read a passage out loud from the book	
2	My child and I read the book together (paired reading as described in booklet)	
3	I encouraged my child to read the book to his/her siblings or to other family members and friends	
4	Other:	
VOCABULARY BUILDING		
5	I asked my child to find words they didn't know from the book they were reading	
6	Together we looked at the context of the sentence and tried to figure out what the word meant	
7	I gave my child the meaning of the unknown word	
8	We looked up unknown words in the dictionary	
9	Other:	
READING COMPREHENSION STRATEGIES		
10	I coached my child to reread parts of the book when he/she didn't understand	
11	I coached my child to make predictions about what might happen next in the story	
12	I asked my child to summarize what had happened in the book	
13	I coached my child to make connections between characters and events in the story	
14	I asked my child questions about the story using *wh*-questions	
15	I asked my child to retell the main events of the story	
16	Other:	
ENGAGEMENT AND ENCOURAGEMENT		
17	I encouraged my child to discuss the book with me What parts did they like/dislike the most? Did they like the characters?	
18	I made shared/paired reading a fun activity for both of us	
19	I made sure that when reading with my child I was patient, tolerant, and positive and did not concentrate too much on correcting their reading	
20	Other comments?	

Appendix Q: Book Reading Group Parent Feedback Survey

As you know, this was a very unique study and you parents played a very important role. I would like to take this opportunity to sincerely THANK YOU for all your efforts! Without you, this study would not have been possible.

I am also very interested to hear what you and your child thought about this summer reading program. If you could, please take a moment to answer the short Parent Feedback Questionnaire below and return it with your child's latest progress book report and have your child answer the Child Feedback Questionnaire as well.

Again, thank you all!

PARENT FEEDBACK QUESTIONNAIRE

1. I enjoyed this summer reading program: YES NO
   (Please explain your answer in greater detail ie: what things did you like the most/least)

2. I felt the program was explained to me well: YES NO
3. I felt the researcher was accessible and easy to talk to: YES NO
4. I felt my child enjoyed this summer reading program: YES NO
5. I felt the books were a good choice for my child: YES NO
6. I would participate in another study similar to this one: YES NO

7. Would you change this study in any way? Please provide details below

8. In your opinion did this program affect your child in any of the following ways?
   (please provide detailed answers below)
   -Did it increase/decrease how much your child normally reads?

   -Did it increase/decrease how much your child wanted to read?

   -Did it change their attitude towards reading in any way?

   -Did it affect your child in any other ways not mentioned?

9. Any other comments?

Appendix R: Book Reading Group Child Feedback Survey

CHILD FEEDBACK QUESTIONNAIRE

(circle Yes or No and provide detailed answers where appropriate)

1. I enjoyed this summer reading program: YES NO
   What things did you like the most/least?

2. Overall, I liked the books that were sent to me: YES NO
   Which book was your favourite? Why?

3. If I could, I would participate in this study again next summer: YES NO

4. Would you change this study in any way? Please provide details below

5. Did this summer reading program...

   a) Make you read MORE than you normally would in the summer? YES NO

   b) Make you WANT to read MORE books? YES NO

   c) Make you LIKE reading more? YES NO

   d) Do anything else?

6. Any other comments?

Appendix S: Control Group Follow-up Survey

CONTROL GROUP PARENT QUESTIONNAIRE:

1. How many books did your child read over the summer? _____

2. How many hours did your child spend reading per week? _____

3. What types of books were they?
   a) comics b) novels c) magazines d) other _____

4. Did you encourage your child to read books with his/her siblings or with another adult?

5. Did you read any books with your child in the summer?
   a) Yes b) No

IF YES...

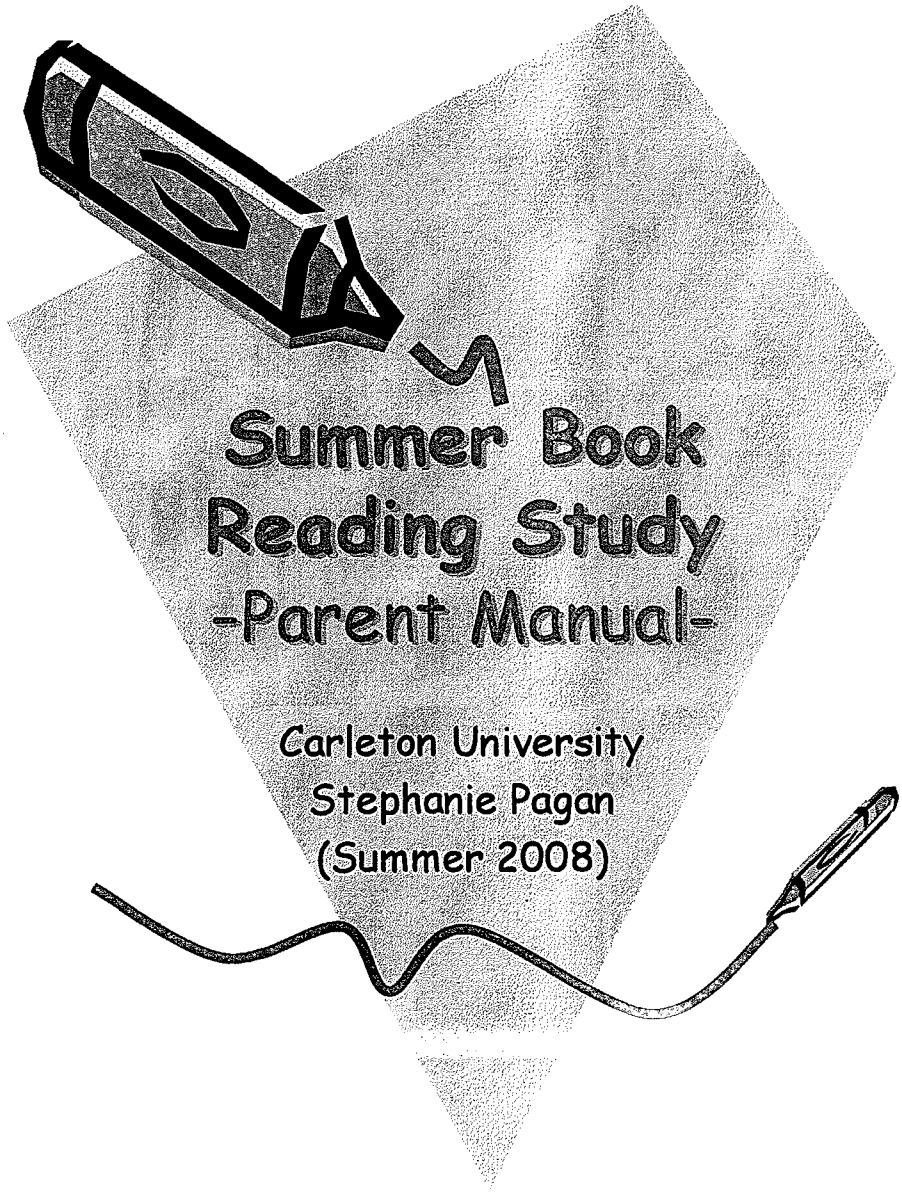
6. How did you read the book together?
   a) took turns reading pages/chapters aloud
   b) parent read most of the book to the child
   c) child read most of the book to the parent (I listened to my child read the book)

7. What things did you do while reading with your child?
   a) Vocabulary building
   i) asked child to find words they didn't know from the book
   ii) together we looked at the context of the sentence around the unknown word in order to figure out its meaning
   iii) I told my child the meaning of the word
   iv) We looked up the unknown word in the dictionary

   b) **Reading Comprehension** **"I asked my child...**
   i) to reread parts of the book they didn't understand
   ii) to make predictions about what would happen next
   iii) to summarize what happened in the book
   iv) to make connections between characters/events in the story
   v) *wh*-questions about what was happening in the story
   vi) to retell the main events of the story

   c) **Engagement/Encouragement**
   i) I encouraged my child to discuss their book with me
   ii) I made reading a fun activity for both of us
   iii) I made sure to make reading a positive activity

Appendix T: Parent Training Booklet (17 pages in length)



Why is this important?

- Research has shown us that how much a child reads significantly impacts how well they read and how well they understand what they read. Specifically, reading more leads to better reading skills which makes perfect sense. Even so, some children just don't like to read. As a result, your child's attitude towards reading can be a significant predictor of whether your child will read frequently. Research has shown us that children who have a more positive attitude towards reading will tend to read more.

- So how can we make children want to read more? Well, making reading a fun activity is a must and that is what our study will hopefully do—with your help. Matching your child to a book that is at the right reading level and is about something they find interesting is a start. Then we need to engage them in the book and build their interest and this is where you parents can have the greatest impact.

What can parents do?

We know that parents are a huge influence in their child's lives and that is why we are asking you to participate in this summer book reading program. With your help we hope to make reading a fun and engaging activity that will encourage your child to read more frequently during the summer and have a lasting effect on your child's reading attitude and achievement.

Here are some things that parents can do to encourage their child to read more:

- Always present reading as a fun activity and not as 'homework'
- Always try to give your child lots of praise and encouragement. Tell them, "good job!" or "I'm proud of you" or "well done" or anything else that highlights their willingness to read
- Encourage reading a book when your child says they are 'bored' or instead of watching TV
- Ask questions about the book your child is reading
- Parents can serve as good reading role models so have your child 'catch' you reading
- Take your child to the library or bookstore so your child can choose their own book to read

What are we asking you to do for this study?

- Each week from the beginning of July to the end of August (total of 8 weeks) your child will receive a book package in the mail. In this package there will be a component for your child and a component for you-the parent (see next page).
- With each book that is sent, we will ask you to read with your child in a "paired-reading" activity for 5 to 15 minutes each day for 5 days of the week (this reading activity is detailed later). When the 5-15 minutes is complete then you will ask your child to continue reading the book on their own. The next day when you meet again for the paired-reading activity you will ask your child what you missed from the book as well as other comprehension and vocabulary questions (detailed later in this manual).
- Our goal is to make reading fun and encourage your child to read more frequently. Your interaction with your child is especially important for the success of this program so we will ask you to complete the parent checklist as soon as the book is completed in order for us to determine how successful this intervention is. This is the first study of this kind so your participation is very important and appreciated!

What will be sent to you and your child each week

Your childs book package includes:

- A new book matched to their interest and difficulty level. A list of book titles that are similar to the given book will also be provided to promote extra reading in addition to the given book for that week. The locations where these suggested titles can be found will also be provided.
- A postcard encouraging reading
- A progress report (to be returned to the researcher promptly)

The parent package includes:

- Details about the book that was sent: summary of the book; possible comprehension questions to ask; and specific vocabulary words you can help your child with
- A postcard reminding you to encourage your child to read and send back their completed progress reports
- A checklist with a list of activities you are encouraged to take part in with your child (to be returned to the researcher when each book is finished).

Paired Reading

- You may feel that your child is too old for shared reading, but all children (even in upper elementary grades) still say that they enjoy reading books as a family with some families even reading whole series of books together. For this exercise we recommend that you find a quiet undisturbed area in your home and read with your child for a minimum of 5 to 15 minutes a day for five days of the week. Start reading the book first and then have your child tell you when they want to take over. If your child is finding the book difficult then you can take turns reading different pages. When your child makes a mistake or is stuck on a word provide the correct word with no fuss and provide a great deal of praise and positive reward when your child reads correctly. Mistakes are bound to happen, but we don't want your child to dwell on them—we want them to learn from it and move on.

- The purpose of paired reading is to discuss the meaning of the book and what is happening in the story. Together you can use the reading comprehension strategies listed below to help your child better understand what they are reading. You are basically acting as a reading coach for your child so remember to always create a positive interaction where errors are not dwelled upon.

- This can be a very fun activity for parents and children and is also very beneficial for your child's overall reading achievement. By reading aloud with you, your child is improving their reading fluency and learning to read with expression and skill. They are also being exposed to new words and unfamiliar words which, with your help, improves their vocabulary knowledge. In addition, the comprehension questions you ask about the book helps your child understand what they are reading and makes them think about what is happening in the book on a deeper level. Finally, spending time reading the book with a parent further engages reading and will hopefully create more interest for future reading.

How to build vocabulary during Paired-Reading

- When you read books with your child you are bound to come across words that are unfamiliar or new for your child. This is an excellent opportunity for you to discuss the word and try to figure out the meaning of the word together. You can do this by 1) rereading the passage and based on surrounding words and the context of the passage determine what the meaning must be; 2) looking up the word in the dictionary together; 3) or by explaining what the word means in your own words.
- You can also help your child build their vocabulary by asking them to show you words in the book that are new or unfamiliar to them—you can do this on a daily basis so you end up discussing 5 new words per week. Then together you can determine the meaning of each word. Finally, encourage your child to ask you questions about any of the words they encounter in the books they read—a dictionary may come in very handy for them while they are learning so many new words.

How to improve <u>comprehension</u> during paired-reading

Strategies to help your child better understand what they are reading:

1. Rereading passages
2. Making predictions
3. Making connections
4. Summarizing
5. Asking *wh*-questions about the story.

Comprehension Strategies continued

1. Rereading passages: This technique is easiest to use when you and your child are reading the book together, but you can also use it when encouraging your child to identify the parts that they don't understand in the book when they are reading on their own. To use this technique have your child stop, back up, and reread the page or passage that is giving them difficulty. If they still don't understand what is happening after the second reading then you can ask them questions about what they just read. What exactly are they missing? Give them hints and ask them specific questions about what they don't understand. If they are still having difficulty then discuss what is happening in the story and try to figure it out together based on what is happening in the story at that time.

2. Making predictions: To use this technique have your child stop reading for a moment and ask them to guess what might happen next in the story. Ask, "What do you think is going to happen?" and then follow this question with, "Why do you think that will happen?" Discuss the different possibilities no matter how outrageous they may be. Encourage your child to predict what could happen in the story based on what has already happened.

Comprehension Strategies continued

3. Making connections: To use this technique have your child pause and make connections between characters and events in the story. You can ask such questions as, "How do those 2 characters know each other?" or "why do you think that character acted the way he/she did?" or "Did anything happen at the beginning of the story that would have led the character to do what she/he did?"

4. Summarizing the book: You can use this technique as your child is reading the book and after they have finished the book. To use this technique, as your child is reading their book have them tell you what has happened so far. Encourage as much detail as possible. For example, ask for character names, where the story takes place, what type of personality the characters have (what are they like?), what do the characters look like, is there a moral or lesson to be learned in the story?

   At the end of the story when your child has finished reading the book you can ask them to summarize what happened and discuss the book in more detail. Did they enjoy it? Would they change anything? Would they recommend the book to their friends?

Comprehension Strategies continued

5. Ask your child *wh*-questions: You can use this technique while your child is reading the book on their own or during paired reading with you and/or after they have finished reading the book. The exact questions will change depending on the book your child is reading, but below are a few (very basic) examples. You should try to make your questions clear and easy to understand and they should directly relate to the story. Be very specific and ask as many as you can in order for your child to really show how much they understood from the story. Basically to help improve your child's understanding of the story you want to ask a number of questions using why, who, where, what, when, and how.

- WHY did the character behave that way?
- WHY did the character feel that way?
- WHO was the main character?
- WHAT was the problem the character had to solve?
- WHAT was the moral/lesson of the story?
- WHERE did the story take place?
- WHEN did the character solve the mystery?
- HOW did the character feel when _____ happened?

What to do when you finish a book:

1. Have your child choose their favourite part of the book and read you a 100-word passage (then sign their progress report to say you heard them read this passage).
2. Have your child complete their progress report and mail it back to the researcher.
3. Complete the parent checklist and return it to the researcher.
4. If you have not received your next reading package in the mail then encourage your child to do other reading while you wait—perhaps a book from the recommended reading list sent in the latest package.

Example of a 5-day paired-reading schedule

Day 1: Beginning a new book

- -find a quiet undisturbed spot for you and your child to start your paired-reading activity.
- -start reading the book and tell your child to tell you when they want to take over the reading
- -as your child reads, listen carefully, remember to give positive feedback, and help correct any errors or problems they may have.
- -remember to watch for unfamiliar words that you can look up together
- -at the end of your paired-reading activity (after 5 to 15 minutes) ask your child some reading comprehension questions (i.e., What do you think is going to happen next?
- Who is the main character? etc) or have them summarize what happened so far in the story.
- then send your child to continue reading the book on their own.

Day 2:

- Find the same quiet spot for you and your child to continue your paired-reading activity
- Start the activity by asking your child what happened in the story since your last meeting. How much did they read on their own?
- Ask them to *summarize* what happened
- Are there any new characters?
- Were there any unfamiliar words? If yes, then take the time now to look up the meaning of each
- Start reading the story and have your child take over when they are comfortable
- Throughout the story take the opportunity to ask questions about what is happening in the book (refer to the *wh*-questions listed above)
- When the 5 to 15 minutes is complete ask your child to continue reading on their own.

Day 3:

- Continue your paired-reading activity
- Start today by asking what unfamiliar words your child encountered while reading on their own. Go through them and find meanings for each.
- Ask what you missed from the story when your child was reading on their own
- Ask them to summarize what happened
- Ask them other comprehension questions related to the story (i.e., why did the character do _____; how did the character feel? Make predictions about what may happen next.
- Discuss the book in as much detail as possible

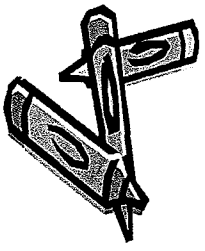
At the end of the 5 to 15 minute activity have your child continue to read the story on their own

Day 4:

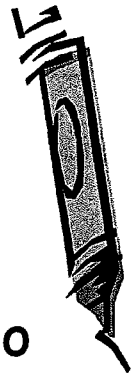
- Follow the same strategies as Days 1-3
- Try to ask different comprehension questions
- Discuss the book and its characters in as much detail as possible
- Remember to encourage your child to continue reading on their own

Day 5: Finished the book?

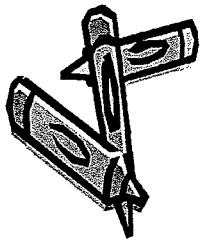
- If you are finished the book now then you can encourage your child to continue reading a new book while you wait for the next mail package.
- You can also continue to discuss the book you just finished—did your child like it? Would they change anything about it? Can they identify with any of the characters? etc



Final Note



You parents can have a significant impact on your child's reading habits and attitudes. Try your best to use some of the strategies mentioned in this booklet and remember to always remain patient, tolerant, and positive—when your child has difficulty with reading it is important that they can come and ask you for help. Together you can make reading FUN!!



Contact Info

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Table 1

Study 1: Descriptive Statistics for Achievement Measures

Variable	*M*	*SD*
Achievement		
Expressive vocabulary[a]	96.11	12.28
Receptive vocabulary[a]	103.84	11.65
Spelling[a]	98.75	13.81
Passage Comprehension[a]	100.82	9.94
Word Identification[a]	102.49	11.70
Reading Motivation		
Intrinsic Motivation (MRQ: max 68)	50.06	9.36
Reading Self-concept (RSCS: max 50)	38.32	7.48
Reading Attitude (ERAS: max 40)	29.92	5.76
Control variables		
Math achievement[a]	94.04	11.02

[a]Standard scores with means of 100; N = 116

Table 2

Study 1: Descriptive Statistics for Child Activities and Parent Motivation ($N = 116$)

Variable	*Median*	*Range*
Literacy experiences		
Reading frequency at bedtime[a]	4.0	0-7
Reading frequency at other times[b]	4.0	0-8
Child frequency of reading for pleasure per week[c]	2.0	0-4
Child goes to library to borrow books[d]	2.0	0-4
Age onset of shared reading with parent[e]	3.0	1-7
Frequency of shared reading prior to Gr1[d]	3.0	0-4
No. of children's books in the home[f]	5.0	0-6
	M	*SD*
No. of books borrowed from library	2.97	2.24
Other child activities	*Median*	*Range*
No. daily TV hours watched by child[c]	1.0	0-4
No. daily computer hours by child[c]	1.0	0-4
	%	*SD*
Child Book Title Checklist[g]	31.55	20.63
Child Author Checklist[g]	29.03	20.22
Adult Book Author Checklist[g]	34.23	22.96
Parents motivating their child to read		
Parents who motivate their child to read for pleasure[h]	71.7	.44
Motivation Method: Supply materials[h]	46.7	.50
Motivation Method: Reward[h]	11.7	.32
Motivation Method: Interaction[h]	23.3	.43
Motivation Method: Parent as a model[h]	20.0	.40
Motivation Method: Autonomy[h]	5.0	.22
	M	*SD*
Number of motivation methods used[i]	1.51	1.27

[a]Child Report; 8-point scale: 0 (never), 1 (1 time per week)…7 (7 times per week)
[b]Child Report; 9-point scale: 0 (never), 1 (1 time per week)…8 (more than 7 times per week)
[c]Parent Report; 5-point scale: 0 (0 hours), 1 (1-2 hours), 2 (3-4 hours)...4 (6+hours)
[d]Parent Report; 5-point scale: 0 (never), 1 (rarely), 2 (sometimes), 3 (often), 4 (very often)
[e]Parent Report; 7-point scale: 1 (before birth), 2 (birth-6mth), 3 (7mth-1yr), 4 (1 yr+)...7 (don't remember)
[f]Parent Report; 7-point scale: 0 (0 books), 1 (1-20), 2 (21-40)...6 (more than 101)
[g]Reported are mean percentages of correct answers selected.
[h]Reported are percentages of positive parent responses.
[i]Reported are mean number of methods from 5 possible sources

Table 3

Study 1: Factor Loadings for Principal Component Analysis (PCA) Used in Data Reduction

Variable	Factor Loading	Total % Variance Explained
PCA: Reading Motivation		65.49
1. Reading Self-concept	.86	
2. Intrinsic Reading Motivation	.84	
3. Reading Attitude	.71	

N = 116; Note: Eigenvalue was above 1.0

Table 4

Study 1: Zero-order Correlations (below diagonal) among Key Variables and Partial Correlations Controlling for Child Grade Level (above diagonal)

Variable	1	2	3	4	5	6	7	8
1. Reading Exposure	--	.37**	.45**	.65**	.54**	.53**	.41**	.31**
2. Home Literacy Environment	.37**	--	.28**	.34**	.35**	.27**	.21**	.41**
3. Reading Motivation	.46**	.28**	--	.51**	.24**	.47**	.35**	.15
Child Achievement								
4. Reading Ability	.55**	.32**	.48**	--	.60**	.76**	.59**	.28**
5. Vocabulary	.53**	.35**	.24**	.57**	--	.39**	.53**	.46**
6. Spelling	.51**	.27**	.46**	.74**	.39**	--	.47**	.15
Control Measures								
7. Child Math Achievement	.36**	.20*	.33**	.60**	.52**	.47**	--	.32**
8. Socio-economic Status (SES)	.35**	.41**	.16	.21*	.46**	.14	.28**	--

* $p = 0.05$; ** $p = 0.01$; $N = 116$

Table 5

Study 1: Hierarchical Regression Analyses: The Home Literacy Environment Predicting Child Outcome Measures and the Role of Reading Exposure as a Mediator

Criterion *Predictor Order*	R^2	ΔR^2	ΔF	ß
Reading: Model 1				
1. SES	.04	.04	5.12*	-.03
2. Child Grade Level	.15	.10	13.69**	-.32**
3. Math Ability	.40	.26	47.90**	.37**
4. Home Literacy Environment	.44	.04	7.17**	.09
5. Reading Exposure	.59	.15	40.52**	.46**
Reading: Model 2				
4. Reading Exposure	.58	.18	48.23**	.46**
5. Home Literacy Environment	.59	.01	1.71	.09
Vocabulary: Model 1				
1. SES	.21	.21	30.01**	.24**
2. Child Grade Level	.21	.01	0.73	-.06
3. Math Ability	.38	.16	29.49**	.32**
4. Home Literacy Environment	.40	.02	3.78†	.08
5. Reading Exposure	.47	.07	15.10**	.32**
Vocabulary: Model 2				
4. Reading Exposure	.47	.09	18.47**	.32**
5. Home Literacy Environment	.47	.00	0.91	.08
Spelling: Model 1				
1. SES	.02	.02	2.25	-.13
2. Child Grade Level	.02	.00	.28	-.04
3. Math Ability	.22	.20	28.80**	.33**
4. Home Literacy Environment	.26	.04	5.71*	.11
5. Reading Exposure	.38	.12	20.56**	.41**
Spelling: Model 2				
4. Reading Exposure	.37	.15	25.47**	.41**
5. Home Literacy Environment	.38	.01	1.66	.11

* $p = 0.05$; ** $p = 0.01$; N = 116; † $p = 0.06$

Table 6

Study 1: Hierarchical Regression Analyses: Children's Reading Motivation Predicting Child Outcome Measures and the Role of Reading Exposure as a Mediator

Criterion *Predictor Order*	R^2	ΔR^2	ΔF	ß
Reading: Model 1				
1. SES	.04	.04	5.12*	.01
2. Child Grade Level	.15	.10	13.69**	-.34**
3. Math Ability	.40	.26	47.90**	.33**
4. Reading Motivation	.50	.10	22.10**	.20**
5. Reading Exposure	.61	.11	31.55**	.41**
Reading: Model 2				
4. Reading Exposure	.58	.18	48.23**	.41**
5. Reading Motivation	.61	.03	8.33**	.20**
Vocabulary: Model 1				
1. SES	.21	.21	30.01**	.26**
2. Child Grade Level	.21	.01	.73	-.07
3. Math Ability	.38	.16	29.49**	.33**
4. Reading Motivation	.38	.002	.40	-.08
5. Reading Exposure	.47	.09	18.91**	.37**
Vocabulary: Model 2				
4. Reading Exposure	.47	.09	18.47**	.37**
5. Reading Motivation	.47	.004	.92	-.08
Spelling: Model 1				
1. SES	.02	.02	2.25	-.08
2. Child Grade Level	.02	.002	.28	-.06
3. Math Ability	.22	.20	28.80**	.28**
4. Reading Motivation	.33	.11	17.39**	.23**
5. Reading Exposure	.41	.08	14.72**	.35**
Spelling: Model 2				
4. Reading Exposure	.37	.15	25.47**	.35**
5. Reading Motivation	.41	.04	7.35**	.23**

* $p = 0.05$; ** $p = 0.01$; N = 116

Table 7

Study 1 Hierarchical Regression Analyses: Children's Reading Exposure Predicting Child Achievement Measures

Criterion *Predictor Order*	R^2	ΔR^2	ΔF	ß
Reading				
1. SES	.04	.04	5.12*	-.01
2. Child Grade Level	.15	.10	13.69**	-.33**
3. Math Ability	.40	.26	47.90**	.34**
4. Home Literacy Environment	.52	.11	13.00**	.07
Reading Motivation				.19**
5. Reading Exposure	.62	.10	28.16**	.40**
Vocabulary				
1. SES	.21	.21	30.01**	.23**
2. Child Grade Level	.21	.01	F<1.00	-.05
3. Math Ability	.38	.16	29.49**	.33**
4. Home Literacy Environment	.40	.02	1.89	.09
Reading Motivation				-.09
5. Reading Exposure	.48	.08	16.31**	.35**
Spelling				
1. SES	.02	.02	2.25	-.11
2. Child Grade Level	.02	.002	F<1.00	-.05
3. Math Ability	.22	.20	28.80**	.29**
4. Home Literacy Environment	.34	.12	10.13**	.08
Reading Motivation				.22**
5. Reading Exposure	.41	.07	12.71**	.33**

*$p = 0.05$; ** $p = 0.01$; N = 116

Table 8

Study 2: Comparison of Children Selected to Participate in the Intervention to Non-selected Children on Measures of Achievement

	Non-selected Children (N=59)		Selected Children (N=57)	
Variable	*M*	*SD*	*M*	*SD*
Achievement Measures				
Receptive Vocabulary[a]	109.12	11.59	98.39	8.93
Expressive Vocabulary[a]	102.64	10.17	89.35	10.55
Spelling[a]	102.92	12.25	94.44	14.12
Math[a]	96.34	10.84	91.67	10.79
Passage Comprehension[a]	104.76	9.29	96.74	8.96
Word Identification[a]	106.93	10.74	97.89	10.92
Reading Motivation				
Intrinsic Reading Motivation[b]	50.28	8.44	49.84	10.29
Reading Self-concept[c]	38.97	7.44	37.65	7.52
Attitudes towards Reading[d]	30.44	5.47	29.39	6.04
	Median	*SD*	*Median*	*SD*
Reading Frequency				
At bedtime during a typical week[e]	5.0	2.45	4.0	2.69
At other times during a typical week[f]	4.0	2.38	4.0	2.43

[a]Standard scores with means of 100; N = 116
[b]Motivation to Read Questionnaire (Max = 68)
[c]Reading Self-Concept Scale (Max = 50)
[d]Elementary Reading Attitude Survey (Max = 40)
[e]Child Report; 8-point scale: 0 (never), 1 (1 time per week)…7 (7 times per week)
[f]Child Report; 9-point scale: 0 (never), 1 (1 time per week)…8 (more than 7 times per week)

Table 9

Descriptive Statistics: Number of Months Ahead or Behind Current Age on Measures of Achievement for Selected and Non-selected Children

	Non-selected Children (N=59)		Selected Children (N=57)	
Variable	*M* (months)	*SD*	*M* (months)	*SD*
Achievement Measures				
Receptive Vocabulary[a]	20.24	26.48	-1.21	14.75
Expressive Vocabulary[a]	6.76	18.65	-16.42	13.76
Passage Comprehension[a]	7.85	17.16	-7.42	15.85
Word Identification[a]	10.95	16.72	-4.77	16.69

[a]Standard scores with means of 100; N = 116

Table 10

Study 2: Pre-test, Post-test, and Gains Scores for Reading Ability According to Group

	Pre-test		Post-test		Gains Score	
Group/Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Book Reading Group (N = 28)						
Passage Comprehension						
Raw score	30.57	7.72	32.29	9.39	1.71	4.40
Standard score	95.86	10.58	94.57	10.69		
Word Identification						
Raw score	59.14	11.70	60.82	15.39	1.69	7.57
Standard score	97.50	10.15	95.39	10.64		
Oral Reading Fluency						
Total raw score	86.21	41.70	91.86	42.82	4.19	16.03
Reading Ability Composite[a]					2.53	7.20
Control Group (N = 29)						
Passage Comprehension						
Raw score	32.07	5.17	31.66	6.65	-0.41	4.42
Standard score	97.07	8.07	94.17	9.10		
Word Identification						
Raw score	60.72	12.02	60.28	12.01	-0.45	5.13
Standard score	98.28	11.78	95.62	10.47		
Oral Reading Fluency						
Total raw score	80.24	37.47	78.62	38.00	-1.62	17.26
Reading Ability Composite[a]					-0.83	6.67

[a]Reading Ability Composite score was computed using average gains scores for passage comprehension, word identification, and oral reading fluency.

Table 11

Study 2: Pre-test, Post-test, and Gains Scores for Oral Language Skills According to Group

	Pre-test		Post-test		Gains Score	
Group/Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Book Reading Group (N = 28)						
Receptive Vocabulary						
Raw score	122.89	15.36	132.75	15.66	9.86	13.05
Standard score	97.93	8.62	102.75	10.29		
Expressive Vocabulary						
Raw score	80.68	11.91	89.11	11.44	8.43	6.41
Standard score	89.11	10.87	93.14	8.30		
Oral Language Composite[b]					9.14	7.37
Control Group (N = 29)						
Receptive Vocabulary						
Raw score	124.69	15.69	129.79	17.09	5.10	12.90
Standard score	98.79	9.37	101.31	11.48		
Expressive Vocabulary						
Raw score	81.69	11.57	89.10	9.66	7.41	8.68
Standard score	89.59	10.41	93.86	7.96		
Oral Language Composite[b]					6.26	8.44

[b]Oral Language Skills Composite score was computed using average gains scores for receptive vocabulary and expressive vocabulary.

Table 12

Study 2: Pre-test, Post-test, and Gains Scores for Spelling Skills According to Group

	Pre-test		Post-test		Gains Score	
Group/Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Book Reading Group (N = 28)						
Spelling						
Raw score	25.18	5.15	27.18	5.86	2.00	2.13
Standard score	94.68	14.09	92.14	14.34		
Control Group (N = 29)						
Spelling						
Raw score	24.93	4.61	27.00	4.42	2.07	2.46
Standard score	94.21	14.37	92.52	12.00		

Table 13

Study 2: Pre-test, Post-test, and Gains Scores for Reading Motivation According to Group

	Pre-test		Post-test		Gains Score	
Group/Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Book Reading Group (N = 28)						
Intrinsic Motivation[a]	51.43	8.73	49.68	7.79	-1.75	10.02
Reading Self-concept[b]	37.71	7.60	36.14	9.37	-1.57	9.50
Reading Attitude[c]	29.75	6.07	29.07	5.95	-0.68	3.68
Reading Motivation Composite[d]					-1.33	5.99
Control Group (N = 29)						
Intrinsic Motivation[a]	48.31	11.55	47.28	11.94	-1.03	6.80
Reading Self-concept[b]	37.59	7.58	35.83	8.06	-1.76	6.70
Reading Attitude[c]	29.03	6.10	28.48	6.00	-0.55	5.40
Reading Motivation Composite[d]					-1.11	4.97

[a]Total raw score (max = 68), [b]Total raw score (max = 50), [c]Total raw score (max = 40)
[d]Reading Motivation Composite score was computed using average gains scores for intrinsic motivation, reading self-concept, and reading attitude.

Table 14

Study 2: Reading Preferences by Gender (N=57)

Variable	% Of Children Reporting *"I really like it"* Girls	Boys
Animals (Non-Fiction)		
Mammals	44.0	25.0
Marine Life	48.0	28.1
Reptiles	36.0	40.6
Sports		
Biographies	28.0	28.1
Fiction	8.0	18.8
Science (Non-Fiction)		
Earth Science	20.0	28.1
Space	16.0	21.9
Technology	12.0	37.5
Fantasy		
Science-fiction	24.0	15.6
Time travel	32.0	28.1
Supernatural (ghosts, magic, monsters)	56.0	46.9
Other genres		
Adventure (Fiction)	32.0	40.6
History/Geography (Non-Fiction)	12.0	34.4
Children/Family (Non-Fiction)	12.0	0.0
Humor	50.0	46.9
Travel (Non-Fiction)	24.0	15.6
Poetry	20.0	6.3
Romance	24.0	6.3
Mystery	52.0	40.6
Traditional Literature (ie: fables, myths, legends)	52.0	40.6

Note. Significant gender differences for reading preferences were found for History/Geography Non-fiction favoring boys; Child/Family Non-fiction, Poetry, and Romance favoring girls. No other differences were found across the remaining genres.

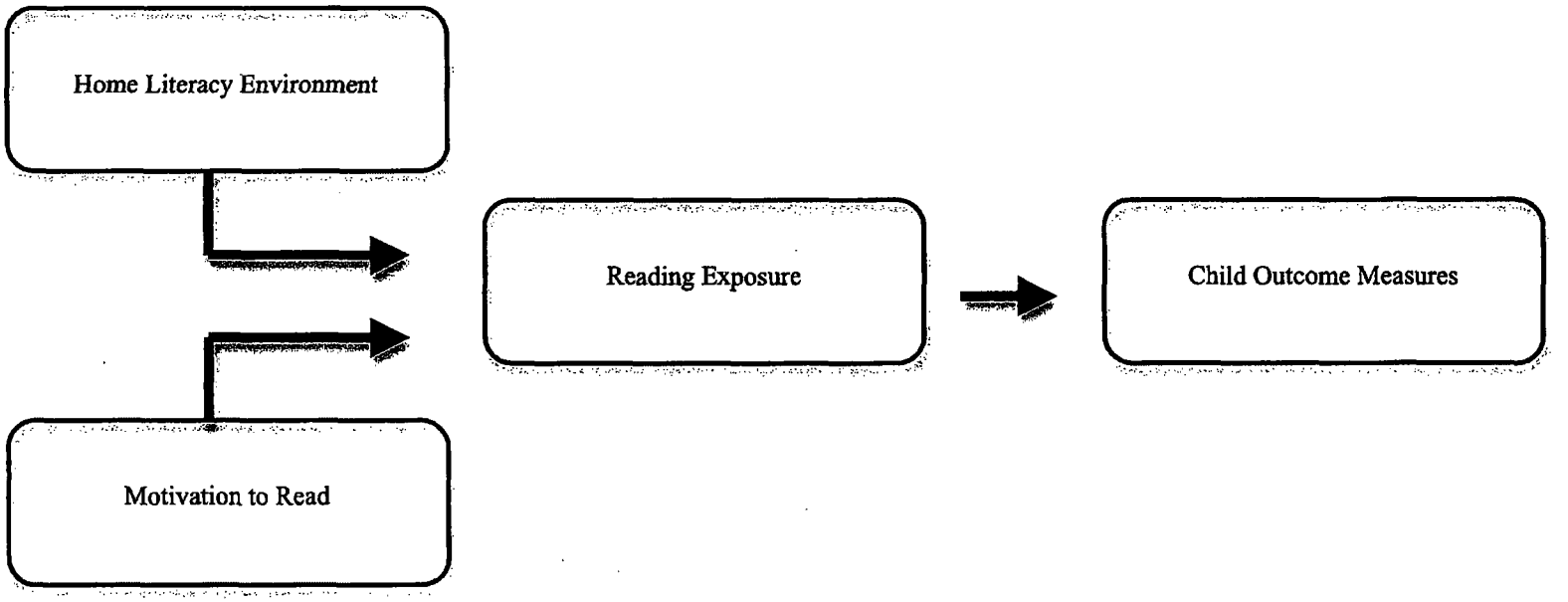
Table 15

Study 2: Percentage of Children Who Responded Affirmatively to the Items on the Make Me Read More Questionnaire (MMRMQ) (N = 57)

Variable	*% of children who responded "Yes"*
I would read more if...	
1. Parent Items	
My Mom/Dad bought me books or took me to a bookstore/library	77.2
My Mom/Dad told me to read more	73.7
My Mom/Dad told me that I am a good reader	70.2
I saw my Mom/Dad reading their own books	29.8
2. Teacher Items	
My teacher told me that I am a good reader	66.7
My teacher told me to read more	65.0
My teacher chose books for me to read	26.3
3. Extrinsic Items	
I got a present/reward/prize for reading more	75.4
My friends said it was a good book	64.9
I had more books at home	59.6
4. Interest Related Items	
I got to choose my own books	91.2
The book was part of a series	75.4
The books were about my hobbies or interests	71.9
I saw they made the book into a movie	68.4
5. Reading Level Items	
The book is challenging to read	50.9
The book has pictures	36.8
The book was really easy to read	35.1

Figure 1

Proposed Mediated Model of Children's Literacy Performance with Reading Exposure as a Mediator to Home Literacy Environment and Children's Motivation to Read



Note. Each construct is a composite score. Home Literacy Environment was comprised of parent reports of frequency of shared reading prior to grade 1, the number of children's books in the home, age onset of shared reading, and whether they reported motivating their child to read for pleasure. Children's motivation to read was comprised of intrinsic reading motivation, reading self-concept, and reading attitude. Children's reading exposure was comprised of parent and child reports of children's reading frequency, and children's print exposure measured by book author and title checklists. Child Outcome Measures included Spelling and two composite measures: (1) Reading Ability was comprised of scores attained from standardized measures of passage comprehension and word identification; and, (2) Vocabulary was comprised of scores attained from standardized assessments of receptive and expressive vocabulary.