

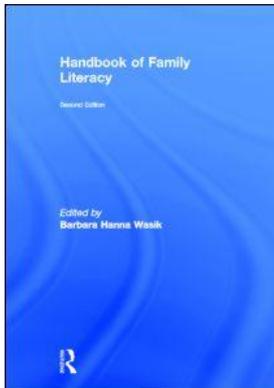
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Child Language and Literacy Development at Home

Monique Sénéchal

Understanding how children learn language and literacy at home requires a complete analysis of the component elements involved as well as a description of how these elements interact. In this chapter, family literacy is viewed as the source of three broad categories of literacy experiences for young children: (a) experiences in which children interact with their parents in writing and reading situations; (b) experiences in which children explore print on their own; and (c) experiences in which children observe their parents modeling literate behaviors when they read or write themselves (Teale & Sulzby, 1986). In other words, parents actively engage their child in literate activities during shared reading or when they teach their child to write their name; they provide materials such as paper and crayons and picture-books that allow a child to explore how literacy works; and also, parents model literate acts when they open mail, write grocery lists, or read books for their own pleasure. Although these activities in young children's lives foster learning, the description of family literacy in the present chapter will be limited to those activities that include print.

These types of experiences have roots in complementary approaches to child development. First, a family literacy perspective is neo-Vygotskian, recognizing that young children learn from their interactions with learned others (Rogoff, 1990). Therefore, describing the literacy interactions of children with their parents, siblings, peers, and other adults is an essential aspect of a family literacy perspective. Second, a family literacy perspective is neo-Piagetian because it emphasizes that children discover and learn about literacy through their own attempts at reading and writing (Clay, 1966; Ferriero, 1986). As such, children are active participants in their learning. Moreover, children's understanding of literacy may differ from that of adults. For example, young children often make the hypothesis that the length of a word is related to the size of the object it represents (Levin & Korat, 1993). Third, the notion of parents as models of reading is well-anchored in a social learning perspective whereby a young child's behavior is affected or modified by observing parents' literate acts (Bandura, 1986). Each category of literacy experiences is described in the next three sections, with most attention devoted to parent-child interactions. In the fourth section of the chapter, the focus changes to school-aged children who read for pleasure to examine a possible continuum from early home literacy experiences to becoming an avid reader.

Parent-child Interactions in Reading and Writing Situations

A fundamental tenet of family literacy is the assumption that parent-child interactions can foster language and literacy. At the same time, not all interactions foster language and literacy equally.

According to the Home Literacy Model, parent-child literacy activities can be categorized into two distinct types of activities: informal literacy activities and formal literacy activities (Sénéchal, 2006; Sénéchal & LeFevre, 2002). Informal literacy activities are those during which the focus of the interactions is on the meaning conveyed by print, not the print per se. The best example of an informal literacy activity is shared reading whereby parent and child focus on the story conveyed by the written words. In contrast, formal literacy activities are those where the attention is directly on the print. In this view, shared reading would become a formal literacy activity if the parents drew the child's attention to the printed word (e.g., can you find all the As on this page? Or look, this word says BABY). In our research, we used the term *teaching* to describe interactions during which parents impart knowledge about the formal aspect of literacy, as for instance, when a parent teaches a child to print his or her name (Aram & Levin, 2004). In three distinct longitudinal studies, we were able to show that informal literacy activities were linked to oral language such as vocabulary, whereas formal literacy interactions were linked to early literacy skills such as letter knowledge (LeFevre & Sénéchal, 2002; Sénéchal, 2006; Sénéchal & LeFevre, 2002). Below, I discuss shared reading and parent teaching in more detail, followed by a demonstration of the relations between family literacy activities during kindergarten and child reading outcomes from Grade 1 to Grade 4.

Shared reading is first and foremost an activity that parents and children do for pleasure. During shared reading, parent and child can enjoy the language and content of stories as well as the accompanying illustrations. At the same time, children can learn from shared book reading. In Sénéchal, LeFevre, Hudson, and Lawson (1996), we described three characteristics of shared book reading that can foster learning about the world and about language. First, the language used in books is more complex than that typically used during conversation. In fact, Hayes and Ahrens (1988) showed that children's books contain 50% more rare words than are present in prime time television or college student's conversation. Similarly, the language used by mothers is more complex during shared reading than other mother-child conversations during free-play or remembering events (Crain-Thoreson, Dhalin, & Powell, 2001). As such, children may be exposed to new syntactic and grammatical forms when listening to shared reading. The second feature of shared reading is that a child has the undivided attention of an adult who can define, explain, and question the child to facilitate understanding or reinforce new knowledge. Certainly, the abundant literature on dialogic reading has shown the value of shared reading to expressive vocabulary acquisition (for a meta-analysis, see Mol, Bus, de Jong, & Smeets, 2008). A third characteristic of shared reading is that books can be read on repeated occasions, thus providing repeated exposure to new knowledge. Our work on shared reading has certainly shown that repeated exposure was sufficient for learning receptive vocabulary (e.g., Sénéchal, 1997; Sénéchal, Thomas, & Monker, 1995). Because shared book reading can be a source of learning, it is the single most studied family literacy activity.

The idea that shared reading can foster child learning is supported by intervention research. In their synthesis of shared-reading intervention studies, the National Early Literacy Panel (2008) reported that shared reading enhanced vocabulary acquisition [*Effect Size (ES) = .60*] as well as general aspects of oral language (*ES = .35*). A closer examination of the research, however, revealed that most of the research establishing the link between shared reading and vocabulary has been conducted with families from higher socio-economic status (SES). For instance, Mol and Bus (2011) included in their meta-analysis 29 correlational studies with preschoolers and kindergartners and, of these, 23 studies had been conducted with middle-class families while only six were conducted with working-class families. One can question whether findings obtained from higher-SES families generalize to families from lower SES levels. In considering the generalizability of findings, three possible predictions can be made about shared reading. First, the association between shared reading and child vocabulary could be stronger in low-SES families

because it exposes the child to language that is quite distinct than that typically found in the home. Second, the association might be weaker because low-SES parents might not have the vocabulary themselves to help define novel words found in books. Third, the association might be similar across socio-economic classes because the relative distribution in reading frequencies might be similar across socio-economic classes. The limited evidence available seems to support the latter interpretation. In the Mol and Bus (2011) study, the association was similarly strong across the two SES levels. Specifically, the median Fisher's z between shared reading and child vocabulary was moderately strong for middle-class families (23 studies; $r = .31$) as well as working-class families (6 studies; $r = .39$). This finding lends support to efforts in promoting shared reading in working-class families.

In contrast to shared reading, parent teaching (also called coaching or tutoring) has received a lot less attention by researchers interested in the home literacy environment, though this situation does not imply that parent teaching is infrequent. In fact, parents report teaching early literacy skills frequently to their young children. Illustratively, 71% of 108 parents surveyed reported often teaching letter names, letter sounds, and how to print letters to their young children (Martini & Sénéchal, 2011). Most interesting was the finding that parents reported using a wide variety of contexts to impart this knowledge, from storybooks to writing lists and cards. Specifically, parents selected an average of 14 different contexts out of 18 different contexts where the presence of print could provide opportunities for teaching. Examples of contexts include alphabet books, letter blocks, street signs, messages from school, greeting cards, and workbooks. Martini and Sénéchal (2011) interpreted the frequent teaching events along with the wide variety of contexts used as fleeting moments of instruction. That is, as children's first literacy educators, these parents were using activities already present in the lives of the children to impart knowledge. The cumulative exposure across context and over time may be inciting learning. Parents are not trying to reproduce the learning in schools or a very structured literacy-learning environment as evidenced by the fact that the use of flashcards and workbooks were used less frequently than were storybooks, alphabet books, and familiar household items. In our longitudinal research, we showed that the frequency of shared reading was robustly related to child oral language skills such as vocabulary, and that the frequency of parent teaching was robustly related to child early literacy skills such as alphabet knowledge, early reading, and phonological spelling (LeFevre & Sénéchal, 2002; Sénéchal, 2006; Sénéchal & LeFevre, 2002). The results also clearly showed that one had to test the relation between home literacy and child outcomes using precise definitions of oral and written language.

On the Importance of Comparing Oral and Written Language

Young children's oral and written language skills are so inter-connected that they could be viewed as a single dimension. Sénéchal, LeFevre, Smith-Chant, and Colton (2001), however, presented theoretical reasons and empirical evidence showing that a distinction between oral and written language constructs would allow a better understanding of the dynamic interplay among home literacy, oral language and written language. They argued that it was essential to control for oral language when assessing the potential role of home literacy to written language, and vice versa. Specifically, it is important to control for vocabulary—an oral language measure—when examining links between the home literacy and written language, and it is important to control for written language (e.g., alphabet knowledge, invented or phonological spelling, and early word reading) when examining links between home literacy and oral language.

In our research on home literacy, we remove statistically the association between oral and written language when testing for the contribution of shared reading and parent teaching. In doing so, a different pattern of association emerges than that reflected by the zero-order correla-

tions. To illustrate this important point, let us compare studies. In their meta-analytic review of correlational evidence, the National Early Literacy Panel (2008) reported associations between shared reading and written language. These findings may be due to the inter-connectedness between oral- and written language. Examining the results of our correlation research, we see that the frequency of shared reading is associated with vocabulary only when we control for written language, whereas the frequency of parent teaching is associated with written language only once we control for oral language (LeFevre & Sénéchal, 2002; Sénéchal, 2006; Sénéchal & LeFevre, 2002; also see, Hood, Conlon, & Andrews, 2008; Stephenson, Parrila, Georgiou, & Kirby, 2008). Hence, one should be critical of research findings suggesting that shared reading is associated with early literacy unless that research demonstrates direct mechanisms by which that learning occurs. For instance, parents need to bring to shared reading specific interactions about the formal aspects of literacy in order for gains in written language to happen (see, Justice & Ezell, 2004). Otherwise, these specific early literacy outcomes are not likely to be realized from shared reading alone because children seem to focus on the story via the illustrations, not the written text (Evans & Saint-Aubin, 2005).

Additional, albeit limited, support for a more differentiated model of parent-child book reading comes from the results of a meta-analysis on intervention research where parents implemented literacy activities to promote reading skills (Sénéchal & Young, 2008). Of the 16 studies found, five were conducted with kindergarteners. Of these five studies, two required parents to tutor their child on alphabet and word reading. For instance, parents were trained to select suitable reading environments, to correct their children's errors, and to teach letter-sound correspondences and letter-sound blending (Kraft, Findlay, Major, Gilberts, & Hofmeister, 2001). The remaining three used shared reading as the literacy activity of choice. The two parent-as-tutors studies yielded statistically significant effect sizes ($ES = .41$ and 1.37). In contrast to these results, the combination of the three studies on shared reading yielded a small effect size ($ES = .18$) that was not statistically different from zero, nor were the effect sizes for each individual study statistically and significantly different from zero. The lack of effects of shared reading on early literacy are in accord with those of Evans and Saint-Aubin (2005) who showed that young children look at the illustrations, not the written words, during shared reading. Furthermore, the null effects are in accord with the Home Literacy Model whereby informal literacy activities such as shared book reading do not support the acquisition of early literacy per se, but specific teaching during home literacy activities does.

From Reading at Home to Reading in Grade School

The differential pattern of results obtained for parent teaching and shared reading is limited to the kindergarten years. It is, however, also of interest to explore whether these parent reports of differences in home experiences have long term association with children's progress in reading. Below, I provide an illustration of the different pathways to literacy acquisition as a function of formal and informal literacy experiences at home. In Sénéchal and LeFevre (2001), we used data from one of our longitudinal studies to illustrate different pathways to literacy. To do so, we separated children according to the frequency of literacy activities that parents reported in kindergarten. In the present report, I conducted a similar analysis with the findings of another longitudinal study with a sample of French-Canadian children who were followed from kindergarten to the end of Grade 4 (Sénéchal, 2006). It is those results that are re-examined here. For this illustration, literacy measures included word reading in kindergarten and Grade 1 as well as reading fluency and reading comprehension in Grade 4.

To examine whether the parent-child interactions in kindergarten reflected differences in the literacy experiences of the children, the sample of children was divided into four groups by

separating the measure of storybook exposure and the measure of parent teaching along their respective medians. The four groups created by this procedure were as follows: (a) children whose parents reported teaching literacy skills frequently as well as reading storybooks frequently (that is, a HighTeach-HighRead group; $n = 28$); (b) children whose parents reported teaching literacy skills frequently but who did not read storybooks as frequently (that is, a HighTeach-LowRead group; $n = 16$); (c) children whose parents reported teaching literacy skills less frequently but who read storybooks frequently (that is, a LowTeach-HighRead group; $n = 25$); and (d) children whose parents reported teaching literacy skills and reading less frequently (that is, LowTeach-LowRead group; $n = 25$). Preliminary analyses revealed that the four groups did not differ significantly in parent education level or in child age, thus ruling out these potential confounding variables.

Figure 3.1 shows the different pathways from kindergarten to Grade 4 for each of the four groups defined by parent teaching and storybook reading. To capture the pattern of findings succinctly and allow comparisons across groups, we calculated standard scores for each measure. Thus, this graph represents the relative progress of the four groups of children across time and, for each measure, the sample mean and standard deviation are 0 and 1, respectively. To be clear, scores above zero are above the sample mean and vice versa.

Children in the HighTeach-HighRead group (top line in Figure 3.1) performed well on all measures across time. Their initial performance advantages on early literacy are maintained through to Grade 4 reading comprehension. Second, the relative performance of children in the HighTeach-LowRead group is very similar to that of the HighTeach-HighRead children's basic reading skills as well as reading fluency in Grade 4. This pattern is in accord with the view that parent teaching about literacy, not storybook exposure, is a central home factor involved in their early success in basic reading skills. As shown in Figure 3.1, however, the similarity between these two groups disappears when one considers reading comprehension: the children in the HighTeach-LowRead group experienced a dramatic decline in their reading comprehension performance relative to their HighTeach-HighRead peers. This pattern is consistent with the view that early parent teaching may facilitate basic skills as well as reading fluency, but this advantage may not extend to eventual success in reading comprehension without the additional support provided by early shared reading.

The reading performance of the children in the LowTeach-HighRead group was lower than that of the two High Teach groups described above until the end of Grade 4. This disadvantage disappeared, however, when we considered Grade 4 reading comprehension. Reading comprehension in Grade 4 was at the sample mean for this group and surpassed that of the HighTeach-LowRead group. This pattern suggests that early experiences with storybooks may have a lasting effect on children's reading, but this effect will be apparent only after children have mastered decoding skills and are reading fluently. Finally, the children for whom parents reported the least involvement, that is those in the LowTeach-LowRead group (bottom line in Figure 3.1) performed poorly (i.e., below the sample mean) in kindergarten and continued to do so until the end of Grade 4.

The pathways presented in Figure 3.1 are generally consistent with those presented in Sénéchal and LeFevre (2001) for their sample of English-speaking children. The findings suggest that home experiences such as storybook reading and parent teaching are important factors in the development of literacy. Most research on reading acquisition shows that children who start school with strong skills maintain their advantage over time (Stanovich, 1992). Stanovich (1986) described this pattern succinctly as the rich get richer, also known as the Matthew effect. The findings for the children in the HighTeach-HighRead and the LowTeach-LowRead groups suggest that the richer and the poorer tend to maintain their relative status. More interesting is that the children in the two other groups do not fit the pattern either. The skills of the children

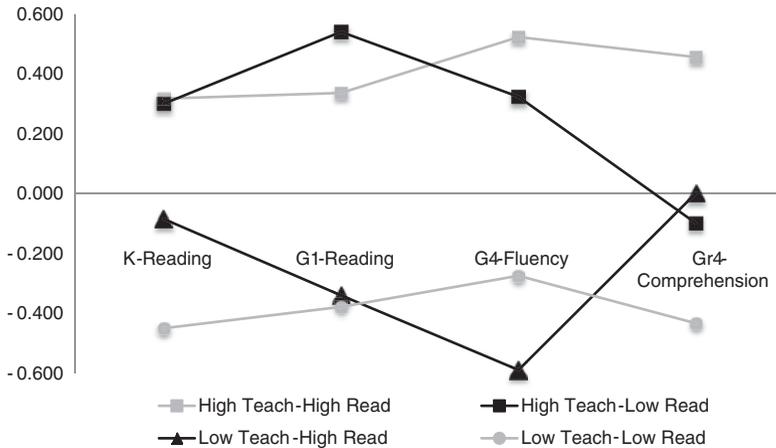


Figure 3.1 Children's literacy standardized scores in kindergarten, grade 1, and grade 4 as a function of the high vs. low frequency (above or below the sample median) with which parents reported reading storybooks (Read) and teaching about literacy (Teach) in kindergarten.

in the HighTeach-LowRead group maintained their above average basic reading skills up to Grade 4, but they could not maintain their advantage for reading comprehension. In contrast, the LowTeach-HighRead group were relatively weaker on all basic reading skills, but showed a relative strength on reading comprehension in Grade 4. Two complementary explanations may account for this pattern.

First, it is possible that children who are exposed to relatively more books at a very young age acquire a desire to read for pleasure and, consequently, become avid readers once they can read independently (Sénéchal, 2006). Some of these children (those in the High-High group) also receive direct literacy instruction from their parents and, consequently, may progress relatively quickly through the transition from listening to someone else read books to reading independently. Once they can read independently, these children may reap the benefits of their frequent exposure to books (see Cunningham & Stanovich, 1998). For others who do not receive as much direct instruction from their parents (those in the LowTeach-HighRead group), the transition to independent reading may take longer and, consequently, it may take more time for these children to make the gains associated with reading frequently. The data in Figure 3.1 certainly suggest that the speed of the transition depends on the literacy skills that children had already acquired at the end of kindergarten. Most important, the data also suggest that early literacy skills are closely related to the frequency with which parents report providing formal experiences with print (that is, teaching the alphabet, to read, and to print words).

Another possible explanation is that young children who were exposed to books frequently (the children in the two High-Read groups) have stronger vocabulary skills and, in time, stronger vocabulary skills can't facilitate reading comprehension. The importance of strong vocabulary skills, however, may not be apparent at the end of Grade 1 because many children have not yet acquired sufficiently strong decoding skills. It is only later that the effects of stronger vocabulary skills can be observed. The data provide partial support for this explanation. First, contrasting the children's vocabulary skills measured in kindergarten revealed that children who were read to more frequently (the two High-Read groups) had significantly stronger vocabulary skills than the children who were read to less frequently (the two Low-Read groups). This finding supports the view that reading books more frequently is related to greater vocabulary skills. Recall that the four groups of children did not differ in parent education and thus parent education cannot

account for the observed differences. Second, vocabulary in kindergarten was weakly related to word reading at the end of Grade 1 ($r = .28$) or reading fluency in Grade 4 ($r = .22$), but it was strongly related to reading comprehension at the end of Grade 4 ($r = .67$). This latter finding supports that view that greater vocabulary skills exert their full influence on comprehension skills rather than basic reading skills. In conclusion, [Figure 3.1](#) captures succinctly the different reading pathways linked to differences in family literacy activities.

Children's Own Explorations of Reading and Writing

Children's own explorations of reading and writing are the second broad category of literacy experiences at home. Indeed, children often experiment with the written code before children are formally taught to read or spell (Clay, 1966). For instance, a young child can pick up a picture-book, look at its illustrations, and even pretend to read it (Paris & Paris, 2003). Indeed, Sulzby (1985) documented a series of phases that varied in sophistication as young children pretended to read familiar picture-books. For example, young children may describe each picture as if each carried a story, then they'll attempt to link the pictures together. The last phase is one where children become aware that they are non-readers and will refuse to read the book arguing that they have yet to learn to read. Although very interesting, the role these pretend reading behaviors play in learning to read, or in eventual reading comprehension success, still remains to be assessed fully.

In addition to pretend reading, attention has been devoted to describing children's explorations of the writing system. These explorations can lead to unconventional understanding on the part of the child of how literacy works. For example, young children often make the hypothesis that the length of a word is related to the size of the object it represents (Levin & Korat, 1993). These explorations can also lead to unconventional spelling of words, labeled invented spelling. Descriptions of young children's spelling attempts show that they begin by drawing and scribbling. Once writings are differentiated from drawings, children attempt to represent in print the sounds that they hear with their limited knowledge of the alphabet (Ferriero, 1986). As children experiment with representing spoken language in print, they refine their productions over time (Chomsky, 1971; Read, 1971; Treiman, 1998). A typical progression would be as follows: Children's representation of the sound structure initially consists of capturing the initial sound in words such as spelling *lady* with L; followed by the initial and final consonant sound, *lady* becoming LD; and, then, the marking of the vowel sound, LAD; and, finally, children might spell the words conventionally. Most interesting is the finding that children use letter names as well as letter sounds to capture the sounds in words. For instance, the letter name D captures nicely the last syllable of *lady*. It is also interesting that knowing how to read is not a necessary prerequisite for spelling phonologically.

Most importantly, children's invented spelling might provide children with opportunities to develop the analytic stance that is helpful in learning to read as well as helping them build initial orthographic representations. Support for the view that children's explorations of print is linked to reading acquisition has been found in correlational studies that showed a robust predictive relation between the sophistication of children's invented (or phonological) spelling in kindergarten and reading outcomes in grade school (e.g., Caravolas, Hulme, & Snowling, 2001; McBride-Chang, 1998; Shatil, Share, & Levin, 2000). Additional support for a role of invented spelling in reading acquisition comes from intervention research designed to promote children's invented spelling sophistication (Ouellette & Sénéchal, 2008; Sénéchal, Ouellette, Pagan, & Lever, 2011). Ouellette and Sénéchal (2008) tested whether promoting invented spelling facilitated word reading with English-speaking kindergarten students who were non-readers. An intensive 4-week intervention was conducted with three homogenous groups of kindergarten children who were

typically-developing and matched across conditions on phoneme awareness, letter knowledge, and invented spelling. Children in the invented spelling condition were provided with individualized feedback on their spelling attempts in the form of an alternate invented spelling that was slightly more complex than the one produced. This feedback respected the developmental progression described in the previous paragraph. The two alternative treatment groups either received phoneme awareness training or exposure to the target words via drawing activities. All three conditions received training in alphabetic knowledge. The findings from Ouellette and Sénéchal (2008) were clear: The invented spelling children, on posttest, learned to read more novel words than did the children in the two control conditions. In a second study, Sénéchal et al. (2011) replicated these findings in a sample of kindergarten children at risk of reading difficulty because of very low phoneme awareness. Thus, promoting growth in invented spelling in the early phases of literacy acquisition eased children's entry into reading.

Parents as Models

In the previous two sections, parent-child literacy activities as well as children's own exploration of the writing system were examined. In the current section, we examine the third and final broad category of literacy experiences, namely, experiences in which children observe their parents modeling literate behaviors when they read or write themselves (Teale & Sulzby, 1986). The hypothesis is that children who have more opportunities to observe their parents model literate acts might develop attitudes and knowledge that can facilitate learning. Three aspects of parent-as-models are examined with each tapping a dimension of parent literacy. First, we examine the assumption that to be successful models, parents need to have sufficient literacy skills themselves. Second, we examine whether the amount of adult reading parents do is associated with child outcomes. Third and final, we re-examine from a sociological perspective the link between parent adult reading and child outcomes.

Parent Reading Skill

Parents model literate acts when they read and send mail, write grocery lists, read the newspaper, or read books for their own pleasure. The assumption is that in doing such acts, parents transmit the value of literacy to their children as well as provide opportunities for children to observe how reading and writing is done. Of course, such a model of literacy initiation or transmission presupposes some level of literacy on the part of parents. Given this assumption, one would think that most studies would include measures of parent reading skill, but, in fact, this is seldom the case. In a meta-analytic review of how parents can help their child learn to read, we unfortunately did not find that parents' literacy levels were measured or taken into account (Sénéchal & Young, 2008). In practice, however, parent literacy, and especially, low literacy has been central to the notion of family literacy. In fact, child literacy is often used as a motivating force to facilitate parents' entry into literacy. This caveat between research and practice needs to be acknowledged and researchers need to start measuring parent literacy directly. The research literature, however, has examined parent literacy indirectly by asking parents about their own reading or the number of adult books in the home. We now turn to that research.

Parent Reading for Pleasure

Parents who read more often for their own pleasure might be stronger role models for their young children than parents who read less frequently. If this were the case, then one should expect an association between the frequency of parent reading and child outcomes. In some

of our research on shared reading, we did measure parent reading. Specifically, we measured parents' knowledge of adult literature as an index of their own reading, that is, we made the assumption that parents who read more frequently should know more about popular adult literature than parents who read less. This proxy measure of reading frequency had the advantage of avoiding social desirability and was adapted from Stanovich and West (1989). The findings from this research were clear: parents' adult reading predicted children's vocabulary over and above that predicted by parents' level of education. Illustratively, Sénéchal et al. (1996) reported the results of two studies that showed that parent reading explained 7% (Study 1) and 9% (Study 2) of additional variance in their 4-year-old children's receptive vocabulary after controlling for parent education. Sénéchal et al. (2008) replicated the findings for vocabulary and reported that parent reading mediated 88% of the relation between shared reading and 4-year-old children's syntactic comprehension after controlling for parent education level. Demonstrating that parent reading (i.e., parent literacy) explained unique variance in child oral language after controlling for parent education was essential to support the notion that parents, when they read on their own, act as models that influences their child. That is, even though parent reading and parent education are correlated (r s ranging from .31 to .48 in the research cited in this section), parent reading is not a proxy measure for parent education. The findings from Sénéchal et al. (2008) are also interesting because they raise the possibility that parents who read frequently for their own pleasure might approach shared reading differently. Observational data are certainly needed to examine this possibility.

Books at Home

Interestingly, most of the research on parent literacy stems from sociological and economic large-scale studies. In the sociological and economic literature, parent literacy is viewed as cultural capital and is often contrasted with social capital. While social capital most often refers to the education and income levels of parents, cultural capital consists of the cultural resources of parents. At minimum and most pertinent to the present chapter, cultural capital refers to parents' knowledge gained from reading and is indirectly assessed by measuring the number of books in the home. Cultural capital can also extend to parents participating in a variety of cultural activities such as going to museums or the theatre. Bourdieu (1977) argued that the socialization afforded by parents' cultural capital prepared children for the styles of interaction favored by teachers and, consequently, better prepared children for schooling and teenagers for higher education. To test the role of cultural capital on reading, sociologists and economists use international population-based surveys. For instance, Chiu and McBride-Chang (2006), using data ($N = 199,097$) collected from 43 countries, showed that 15-year-olds from homes with more books had higher reading scores after controlling for parent level of income, job status, and education level (also see, Chiu & Chow, 2010; Chiu & McBride-Chang, 2010). This effect was present in 98% of the participating countries. Similarly, Tramonte and Willms (2010), using another cohort of the same study ($N = 224,058$ 15-year-old students from 28 countries), showed that cultural capital that included the number of books in the home as well as cultural capital that included parent-child interactions both contributed equally to reading outcomes. The number of books in the home also has a similar effect in younger children. In a study with Grade 4 children ($N = 98,190$ participants from 25 countries), Park (2008) showed that, in 20 of the 25 countries, the number of books in the home had a relatively stronger association with children's reading scores than did early parent-child literacy activities and parent attitudes toward reading after controlling for parent education. In the Park study, the frequency of early parent-child activities was measured with a 6-item parent questionnaire that included reading books, telling stories, singing songs, playing with alphabet toys, playing word games, and reading aloud signs and labels. Parent

attitudes about reading were assessed with a 5-item questionnaire (i.e., I read only if I have to, I like talking about books with other people, I like to spend my spare time reading, I read only if I need information, and reading is an important activity in my home).

In this section on parents as models, we examined whether parents' own literacy skills would influence their capacity to be models, and concluded that there is a need for researchers to start measuring parent literacy in research on the home environment. We also examined whether the frequency of parent reading would be linked to child reading. The assumption is that parents who read more frequently would provide their child with more modeling opportunities. The frequency of parent reading was measured with proxy measures, either checklists of popular literature or the number of books in the home (i.e., as an index of cultural capital). This research revealed that parent literacy is an important part of the family literacy equation, and provides more proximal explanatory power in accounting for differences in child reading than does parent education. Certainly, there needs to be more attention to assessing the impact of parent literacy on children's reading acquisition in order to understand fully the notion of inter-generational transmission of literacy.

A Look at Children's Reading for Pleasure

Although it is often stated that the best thing that parents can do to prepare their child to become readers is to read to them, prospective studies that demonstrate the existence of such a link are rare. In one of our longitudinal studies, however, we were able to demonstrate a statistically significant and moderate association between the frequency of shared reading reported by parents when the children were in kindergarten and children's reported frequency of reading for pleasure in Grade 4 ($r(69) = .35$; Sénéchal, 2006). Indeed, storybook exposure explained 11% of unique variance in the frequency with which children report reading for pleasure after controlling for parent education and child kindergarten alphabet knowledge, phoneme awareness, and vocabulary. The predictive value of storybook exposure remained statistically significant even after controlling for Grade 1 reading and Grade 4 reading comprehension. This prospective study demonstrates that shared reading before the onset of formal schooling has a moderately strong and robust association with reading motivation in the fourth grade.

A developmental perspective to literacy suggests that it is also necessary to document the association between the frequency of independent reading for pleasure and child outcomes. Children who read more for pleasure have more opportunities to practice their reading skills, to learn more about the world, to infer the meaning of novel words from the surrounding written context, and to construct mental representations of the information read by integrating that information coherently by drawing inferences when necessary. Moreover, the exposure to written words might be particularly useful to the construction of high-quality orthographic representations of words (for the same argument with adults, see Stanovich, & West, 1989). The recent meta-analysis conducted by Mol and Bus (2011) is of great use to examine this question. In the meta-analysis, (a) cross-sectional studies and studies with a single age group were included; (b) median correlations were computed across relevant age groups; and (c) reading for pleasure was a measure of the frequency with which children reported reading outside school or assessed indirectly with checklists of popular children's literature. The results were straightforward: reading for pleasure was statistically significantly associated with vocabulary, reading comprehension, and spelling. Specifically, Mol and Bus (2011) reported that the median correlation coefficients between reading for pleasure and vocabulary increased across grades: that is, $r = .36$ (6 studies) in grades 1 to 4; $.45$ (7 studies) in grades 5 to 8; and $.55$ (4 studies) in high school. Interestingly, the magnitude of the association between reading for pleasure and reading comprehension was similar across grades at $r = .36$ (21 studies) as well as between reading for pleasure and spelling,

$r = .42$ (9 studies). For young adults in university, the association remained moderately strong between reading for pleasure and vocabulary at $r = .58$ (18 studies), reading comprehension, $r = .41$ (11 studies), and spelling, $r = .24$ (6 studies).

These results are correlational in nature and, therefore, do not tell us about the direction of the relation. It may be the case that strong vocabulary and written-language skills are necessary in order for children to engage in reading for pleasure. As suggested by Mol and Bus (2011), the increase in the strength of the correlations between vocabulary and reading frequency across grades supports the view that sufficiently strong vocabulary skills are necessary for children to engage in reading for pleasure. No such increase in correlation coefficients was found for reading comprehension and spelling. The difference in results might suggest that vocabulary has a different growth pattern than written-language. Specifically, the vocabulary introduced in books most likely differs in complexity (and, by extension, in opportunities to learn) as children progress across grades. In contrast, it might be the case that the growth in reading comprehension and spelling is more gradual and, consequently, yields more stable correlation coefficients.

Taken together, the longitudinal and cross-sectional findings presented in this section are consistent with the view that parents can help lay the groundwork for their children to become successful readers.

Conclusion

Family literacy is a valuable multi-dimensional construct that encompasses the daily activities of parents and children, and the impact of those activities on the development of oral- and written-language. At the end of the day, the hope is that children will use literacy as the tool that it is: A tool that can help them think and learn, as well as a tool from which they can derive pleasure. When I ask my 11-year-old daughter about her voracious reading behavior, she describes it in terms of the pleasure it gives her, and certainly not in terms of any quantifiable cognitive benefits!

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