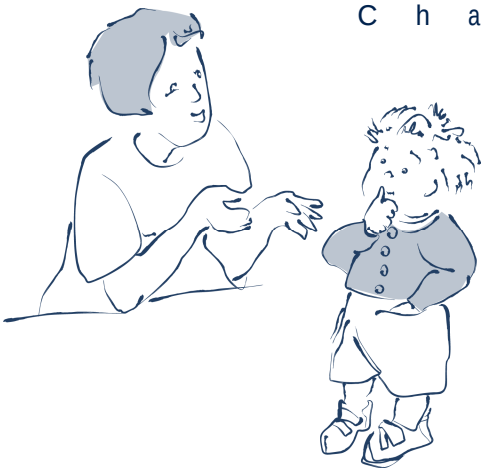
Chapter 06



Read it again, Pam! On the importance of repeated reading for the development of language

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Abstract

Children between the ages of 18 months and six years acquire, on average, five new words per day. In this report, I describe research findings from my lab that show how young children can learn between one to three of these new words from book reading. This description includes three experimental studies with children between the ages of three and five, and one intervention study with children with language delays. A summary of the findings is presented at the end of the report.

Introduction

The importance of early vocabulary development can be appreciated when we think that vocabulary measured early is one of the best predictors of eventual success in reading. Consider the following finding from a longitudinal study conducted in my lab (Sénéchal & LeFevre, 2002). In this study, we found that vocabulary measured at the beginning of kindergarten predicted reading comprehension at the end of grade three, after controlling for parent education, non-verbal intelligence, phoneme awareness, and grade one reading. Given the predictive relation between kindergarten vocabulary and grade three reading, understanding how we can promote early vocabulary development is of interest.

Two types of vocabulary are considered in the present report: spoken and comprehension vocabulary. Spoken vocabulary refers to the words children can actually

produce and is often labelled *expressive vocabulary*. In contrast, *comprehension vocabulary* refers to the words that children can understand, but not necessarily produce, and is often labelled *receptive vocabulary*. This distinction is useful because different factors might facilitate the acquisition of the two types of vocabulary.

Research on spoken vocabulary suggests that young children can learn spoken vocabulary through imitation. Imitation provides children with opportunities to practice retrieving the labels for newly acquired words. In contrast, repeated exposure to new words might be sufficient for the acquisition of comprehension vocabulary. In the research presented below, we considered whether imitation and repeated exposure influenced spoken and comprehension vocabulary differently.

Learning vocabulary from picture books

Book reading is, first and foremost, a source of entertainment. At the same time, books can be a rich source of vocabulary learning. Novel words are often introduced in the text, providing syntactic and semantic cues to their meaning. In addition, novel words are often illustrated providing a picture of a word's meaning. Moreover, the adult reader can facilitate word learning by providing certain verbal behaviors. In fact, it is often recommended that adult readers actively involve young children during book reading in order to enhance children's learning. In my lab, we tested if this were true for both spoken and comprehension vocabulary.

To study the benefits of reading books, we developed a procedure that was used in our experimental studies. First, we selected picture books that would be attractive to young children. Second, we modified the text in the books to introduce novel words. To do so, we replaced words typically known to preschool children (e.g., 'baby') with rarer synonyms (e.g., 'infant'). We modified the text to introduce 10 to 13 novel words. Third, we developed tests to measure comprehension and spoken vocabulary. In the comprehension vocabulary test, children were asked to choose the picture of a named item from a selection of four pictures. The illustrations for the novel words were different than those in the book. For example, the word 'angling' was represented by a man fishing in the book, but was represented by a girl fishing in the test. Thus, the test measured children's ability to learn new words and extend them to new examples of their meaning. Comprehension vocabulary was measured three times in most studies: once before the book reading, once immediately after the book reading, and once after one week. Spoken vocabulary was measured by asking children to label the words using the illustrations in the books, because a pilot study revealed that children did not use the new words when labelling unfamiliar illustrations. Moreover, spoken vocabulary was not tested before the book reading because the pilot study also revealed that children did not use the novel words. After developing this procedure, we were equipped to test how children would learn from book reading events. For each study presented in this report, only the findings that were statistically reliable are described.

Study 1: Learning after reading a book once

In this study, we were interested in measuring if children would learn new vocabulary after a single exposure to a book (Sénéchal & Cornell, 1993). We were also interested in assessing whether active involvement in the form of answering questions would enhance vocabulary more than simply listening to the story. One hundred-and-sixty four- and five-year-olds participated in the study. Each child was seen individually. We found that, after a single reading of the book, active involvement did not promote vocabulary learning more than simply listening to the book reading. Nonetheless, children did learn. On average, children could comprehend 1.6 new words, as reflected by the difference between the number of words correctly identified before and after the book reading. Most interestingly, children could remember the new words learned one week after the book reading. We also found that five-year-olds learned more comprehension vocabulary than did the four-year-olds. It is important to note, however, that the children could not speak any new words after a single book reading.

Study 2: Learning after reading the book twice

In this study, we were interested in testing if the benefits of active involvement would appear after two readings of the books (Sénéchal, Thomas, & Monker, 1995). We read the books in one of three ways: (1) the reader read the book, repeating the novel words once and pointing to them as they were introduced in the text; (2) the reader asked the children to point to the novel words; or (3) the reader asked the children to label the novel words, providing the answer when the children failed to do so. Hence, in each book reading situation, the children were exposed to each novel word twice, for a total of four times, across the two book readings. Forty-eight four-year-olds participated in the study, and were read to individually.

The number of words learned for each book reading situation is presented in Table 1. We found that children learned to comprehend new words in each situation, but they learned more when they were actively involved in the book reading. Answering labelling or pointing questions was equally effective for the acquisition of comprehension vocabulary. The pattern was different for spoken vocabulary. Children did not learn to say the novel words after listening passively to two renditions of the book, but they did learn when they were actively involved. Moreover, the children learned more when they had a chance to imitate the novel words by answering labelling questions as opposed to pointing to them.

Table 1 - Vocabulary acquisition after two readings of a book

Reading Condition	Vocabulary	
	Comprehension	Spoken
Listening to the story	1	0
Pointing to new words	2	1
Labelling the new words	2	2

As in the previous study, we measured if children would remember the words learned after one week. Again, we found no evidence of forgetting, because, on average, the children could comprehend and speak the same number of words as they did immediately after the second book reading.

In addition to measuring book vocabulary, we measured children's comprehension vocabulary with a standardized test, the *Peabody Picture Vocabulary Test – Revised*, to assess if children who differ in vocabulary knowledge would also differ in how they learn from book reading events. We found that the manner of reading affected children with a greater or smaller vocabulary similarly, but that the children with a smaller vocabulary learned less than did the children with a greater vocabulary. These findings suggest that children with a poorer vocabulary benefit from book reading events, but that the amount they learn is attenuated.

Study 3: Learning after reading the book three times

In this study, we assessed the amount of vocabulary learning after repeating the book reading three times (Sénéchal, 1997). Sixty three- and four-year-olds participated in one of three book reading events: (1) they listened to the book read once; (2) they listened to the book read three times; or (3) they answered labelling questions during three book reading events. As presented in Table 2, we found that the children, on average, could not comprehend or speak any new words after a single reading of the book. However, the children could comprehend and speak one new word after listening to the book three times; most impressively, they could comprehend and speak three new words when they answered labelling questions during the three book reading events.

Table 2 - Vocabulary acquisition after three readings of a book

Reading Condition	Vocabulary	
	Comprehension	Spoken
Listening: 1 reading	0.4	0
Listening: 3 readings	1	1
Labelling: 3 readings	3	3

As in Study 1, we found that the younger children learned less overall than did the older children. It is possible that younger children need a greater number of repetitions to learn at a level similar to older children.

In this study, as in the others, we assumed that answering labelling questions would promote vocabulary acquisition because it provided occasions to imitate the new

words. If this is true, children who answered the labelling questions more often should have learned more than those who were unable to answer the questions. Recall that the children were read the book three times and, therefore, had three chances of answering the labelling questions. When they did not succeed, the reader provided the new word. It is of interest to examine whether children learned more when they, and not the reader, provided the new words. Table 3 presents the percentage of times that the children learned new words given the number of times they said the words during reading.

Table 3 -Percentage of times that children learned a new word given that they said it three times, twice, once, or never during the book reading

Child Speaks the Word	Vocabulary	
	Comprehension	Spoken
Three times	42%	43%
Twice	33%	39%
Once	44%	26%
Never	36%	18%

Studying the results of Table 3 is instructive because the findings support the notion that comprehension and spoken vocabulary may not be sensitive to the same types of interactions. We see that children the were just as likely to comprehend a new word if they said the word twice during the book reading (33 percent) or if the reader always provided the new word (36 percent). In addition, the children were just as likely to comprehend a new word if they said it three times or once during the reading. In contrast, the results for the spoken vocabulary show a different pattern. There was a gradual decrease in the percentage of words learned as a function of the number of times the child, not the reader, spoke the words. The children learned 43 percent of the words they themselves spoke three times, but only learned 18 percent of the words they heard the reader speak during the reading. The findings in Table 3 support the idea that imitation enhances spoken vocabulary more than comprehension vocabulary, and this demonstration advances our understanding of vocabulary acquisition. Nonetheless, early childhood educators who want to promote vocabulary acquisition may want to use labelling questions because these do not hinder the acquisition of comprehension vocabulary and certainly foster the acquisition of spoken vocabulary.

Study 4: A book reading intervention for children with language delays

In this study, we tested whether book reading would enhance the vocabulary of children with language delays (Hargrave & Sénéchal, 2000). The 36 children who participated were, on average, four years of age, but their spoken vocabulary was 13 months behind their chronological age. The children attended one of two day care centres in which the early childhood educators occasionally read books during circle time. In one day care centre, we asked teachers to read in the customary fashion; in the other, we trained teachers to use dialogic reading. Dialogic reading (Whitehurst and others, 1994) is a technique to promote language acquisition during book reading by the use of questions, recasts of children's verbalizations, praise, etc. Teachers were asked to read books daily for four weeks and to read each of the 10 books we provided at least twice during this period. The 10 books provided were selected because they: (a) included illustrations of potential new words; (b) included short texts which ensured that teachers would have time to interact with the children; and (c) were borrowed from the neighbourhood library to encourage teachers to make use of the library given that they had very limited budgets to buy books.

We observed teachers book reading behaviors before the intervention and again during the intervention. We found that the teachers in the two day care centres did not differ in how they read to the children before the intervention, and that the regular-reading teachers did not change their reading behaviors during the intervention. As indicated in Table 4, the teachers in the regular reading did not interact much with the children during the book reading. In contrast, the teachers trained in dialogic reading changed their interactions dramatically. The behaviour that increased the most sharply was the frequency with which they used 'wh'-questions (what, who, why) during book reading. This first set of findings confirms that we were able to promote changes in the way that teachers read to the children.

Table 4 - The average number of times that early childhood educators made various types of verbal interactions during book reading during the intervention

Teacher Behaviours	Day Care	
	Regular Reading	Dialogic Reading
Wh-questions	2%	37%
Praise	0%	7%
Model	0%	2%
Repeat child utterances	0%	7%
Recast child utterances	2%	14%

We found that the children exposed to dialogic reading learned more spoken vocabulary than those exposed to regular reading. The spoken vocabulary gains for the dialogic-reading children corresponded to that expected in four months — that is, they gained in a single month the amount of spoken vocabulary expected in four months as measured by a standardized test of spoken vocabulary (the *Expressive One Word Picture Vocabulary Test*). The children exposed to dialogic or regular reading, however, did not show any gains on a standardized measure of comprehension vocabulary (the *Peabody Picture Vocabulary Test – Revised*). Because standardized tests are general and do not test the specific vocabulary in the books, we also measured whether children were learning specific words introduced in the books by assessing their comprehension vocabulary before and after the intervention. We found that the children in the two centres learned new book vocabulary: the dialogic-reading children understood two new words and the regular-reading children understood one new word. Taken together, the findings show that early childhood educators can promote language acquisition during circle time with up to eight children.

Summary

In this report, I provided evidence that children's vocabulary is enriched by repeated exposures to books and by their active involvement during repeated readings. The findings can be summarized under the following four headings:

- *The benefits of repeated readings*. The children understood and spoke more new words after listening to three repeated readings of picture books than after one or two exposures to the books. In fact, the children did not learn to say new words after listening to a single or two renditions of the books.

- *The benefits of active involvement during repeated readings*. The children understood and spoke more new words when they were actively involved during the repeated book readings. Answering requests to label new words was particularly helpful.

- *Developmental and individual differences*. The older children learned more from book reading events than the younger children. The five-year-olds learned more from book reading events than the four-year-olds, and the four-year-olds learned more than the three-year-olds. In addition, the children with a larger vocabulary learned more during book reading than those with a smaller vocabulary. Younger children and children with a smaller vocabulary may need more exposure to the same books to learn at the same level as other children.

- *The role of early childhood educators*. Early childhood educators could implement repeated book readings during circle time with eight children or less. Importantly, children with vocabulary delays whose early childhood educators actively involved them during repeated readings improved their spoken vocabulary more than those children whose teachers involved them less during the book readings.

In closing, early childhood educators are encouraged to use books as a source of fun and learning for children. Early childhood educators can use simple techniques, such as asking labelling questions during repeated readings, to enhance the vocabulary of young children.

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