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AUTHOR   DeBaryshe, Barbara D.
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ABSTRACT
                This document describes a study of a home-based
language stimulation program for disadvantaged children. The project
sought to train parents to act as the primary change agents during a
period of expected rapid developmental progress in their children's
language skills. The subjects were 73 two- to five-year-old children
and their parents, primarily from low-income, predominantly African
American, single-parent families. Data were collected on parental
educational background, beliefs, and practices. These variables
served as predictors of the children's baseline language ability.
Results indicate that the quality and frequency of home reading
interactions were related to maternal education, literacy interest
and skill, and beliefs about reading aloud. For the intervention
portion of the project, subjects were randomly assigned to one of
three groups. A training group received instruction and feedback in
language stimulation techniques to use at home during a daily
picture-book reading routine. Members in a reading group read to
their children on a regular basis, but did not receive any
instruction. A control group received the same pre- and post-test
assessment batteries as did the other groups, without being asked to
read aloud at home. Results indicate that expected changes occurred
in parent-child reading interactions in the parent training group.
Included are seven tables; two appendixes, one containing a list of
manuscripts, presentations, and work in progress, and the other
consisting of parent training lesson outlines. A list of 88
references is also included. (JB)

Final Report for the Project

Early Language and Literacy Activities in the Home

U.S. Department of Education Field Initiated Studies Program

Grant #R117E00044

Principal Investigator: Barbara D. DeBaryshe

Dept. of Human Development & Family Studies

University of North Carolina at Greensboro

Greensboro, NC 27412

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ABSTRACT

Research demonstrating the role of parent-child interaction in the development of language skills highlights the need to involve parents in early education programs. This project involved a detailed analysis of a home-based language stimulation program for disadvantaged children. Subjects were 73 two- to five-year-old children and their parents. The sample consisted of low-income, predominantly African-American, single-parent families.

The purpose of this project was to train parents to act as primary change agents during a period of expected rapid developmental progress. Prior to beginning the manipulation, data were collected on parent's educational background, beliefs concerning the importance of language stimulation, and current language stimulation practices. These family background variables served as predictors of children's baseline language ability, using path analytic techniques. Results indicated that the quality and frequency of home reading interactions were related to maternal education, literacy interest and skill, and beliefs about reading aloud. Quality and frequency of home reading, in turn, explained a modest proportion of variance in children's tested language skills and an impressive proportion of variance in children's reported interest in books.

For the intervention portion of the project, subjects were randomly assigned to one of three groups. A Training group received instruction and feedback in language stimulation techniques to use at home during a daily picture-book reading routine. A Reading group read to their child on a regular basis, but did not receive any instruction. A Control group will receive the same pre- and posttest assessment batteries as the other groups, without being asked to read aloud at home. Thus, it will be possible to separate the effects of increasing reading frequency from the effects of enhancing the content of parent-child verbal interaction. Results indicated expected changes occurred in parent-child reading interactions in the parent training group. No group differences were found for standardized test scores.

Introduction

The purpose of this project was twofold. First, we wanted to understand how naturally-occurring variation in family reading practices in low-SES homes relates to children's developing oral language competence. Second, we tested the efficacy of a home-based read-aloud program. This program involved mothers and their two- to five-year-old children and used the focal activity of joint book-reading as a means for enhancing children's oral language and emergent literacy skills.

This project is of significance to the extent that: 1) linguistic competence is an important developmental attainment of the early preschool period, 2) environmental enrichment can have a beneficial impact on early language skills, 3) parents can be mobilized to provide their children with such enrichment, and 4) the population sampled is considered at-risk in terms of language and later academic achievement.

The specific objectives of the project were as follows:

1.   To identify aspects of the child's home environment that predict oral language competence at baseline.

2.   To collect an extensive and ecologically valid sample of parent-child verbal interaction during home storytime routines.

3.   To test the effects of a parent-training curriculum on the quality of parental verbal stimulation provided during storytime routines.

4.   To test the effects of a parent-training curriculum on the quality of child language production during storytime routines.

5.   To compare the effects of simply increasing reading frequency with the effects of changing both frequency and content of parental language stimulation on children's standardized language test scores.

6.   To assess factors that predict parent's ability to implement the procedures targeted in the training program.

Each of these objectives was achieved.

Language development and language interactions

The period between the onset of spoken language and elementary school entry is a time of unparalleled growth in basic language skills. By age six, the child has mastered the fundamental aspects of syntax and communication pragmatics, and has a working vocabulary of about 16,000 words (Carey, 1977;

McCarthy, 1954; Maratsos, 1983); the latter attainment represents as average of nine new vocabulary items per day.

While the role of constitutional factors in individual differences in language competence cannot be discounted (e.g., Chomsky, 1965; Lenneberg, 1967; Pinker, 1984), this project is predicated on the assumption that the child's social environment is instrumental in supporting the rate and quality of linguistic attainment. An extensive literature on parent-child language interaction repeatedly finds the following correlates of child verbal competence: Frequency of child-directed speech, questions and other directives for child verbalization, semantic contingency of adult responses (e.g. praise, expansion, recasts, continuing the child's topic), and syntactic transparency (Barnes, Gutfreund, Satterly, & Wells, 1983; Clarke-Stewart, 1973; Cross, 1978; Hoff-Ginsberg, 1985; Howe, 1981; Kavanaugh & Manette, 1891; Moerk, 1983; Nelson, Bonvillian, Denninger, Kaplan, & Baker, 1984; Schwartz & Terrell, 1983; Wells, 1985a).

Experimental studies in which the frequency of different language stimulation techniques are varied have provided support for a causal interpretation of many of the above-mentioned correlational findings. Facilitative aspects of adult speech include: The provision of explicit feedback such as praise and correction (Chapman, Leonard, & Mervis, 1986), semantically contingent responses that incorporate the structure of the child's previous utterance (Nelson, Carskaddon, & Bonvillian, 1973; Scherer & Olswang, 1984), incidental teaching (Hart & Risley, 1980) and modeling of novel or advanced linguistic forms (Hursch & Scherman, 1973).

Thus, basic research provides ample justification for the hypothesis that the child's home language environment may be used as a vehicle for enriching language skills. Indeed a number of programs have used parents as change agents for their developmentally delayed or disadvantaged children (e.g., Swinson, 1985; Zelazo, Kearsley, & Ungerer, 1984); such programs are sometimes associated with long-term enhancement of school performance (Levenstein, 1989).

Book-reading as a language-learning activity

Reading aloud to young children is specific activity that has consistently been associated with positive outcomes in terms of oral language skills, emergent literacy, and later reading performance in elementary school (DeBaryshe, in press; Highberger & Brooks, 1973; McCormick & Mason, 1986; Morrow, O'Connor, & Smith, 1990; Share, Jorm, Maclean, Matthews, & Waterman, 1983; Valdez-Menchaca & Whitehurst, in press; Wells, 1985b; Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield, 1988; Whitehurst, Fischel, DeBaryshe, Arnold, Smith, & Epstein, 1991). It has also been suggested that reading at home familiarizes children with the discourse structures used at school (Heath, 1983) and provides a level of literacy awareness

that is needed to benefit from typical methods of reading
instruction (McCormick & Mason, 1986).

Storytime appears to facilitate language learning in several
ways. First, parents use more sophisticated language during
storytime than during caretaking or free play (Snow, 1977; Hoff-
Ginsberg, 1991). Second, parents engage in intensive vocabulary
teaching both by naming objects represented in the illustrations,
and by providing consistent feedback for their child's naming
attempts (Ninio, 1983; Ninio & Bruner, 1978; Snow & Goldfield,
1983). Third, parents exhibit sensitivity in their teaching
interactions by adjusting the difficulty of prompts and questions
to their child's level of ability (Ninio, 1983; Pelligrini,
Brody, & Sigel, 1985; Wheeler, 1983). Fourth, by engaging in
conversation about the pictures, and by helping to tell the
story, children learn verbal turn-taking and dialogue skills.
Finally, it has been suggested that the structural
characteristics of picture-books (e.g., illustrations, repetitive
vocabulary, rhyming) aid language learning (Moerk, 1985).

The number of controlled experimental studies that
investigate the impact of reading aloud with disadvantaged
children is small, but growing. When teachers provide daily,
small-group reading activities, significant gains are seen in
terms of children's verbal participation in read-aloud sessions,
story comprehension, protoreading attempts, and tested vocabulary
skills (Morrow, 1988; Morrow, O'Connor, and Smith, 1990; Valdez-
Menchaca & Whitehurst, in press). Positive results have also
been found for home-based reading programs. For example,
Highberger and Brooks, 1973, and Swinson, 1985, encouraged home
reading by setting up book-lending programs for their preschool
classrooms; in both studies, children showed significant
vocabulary gains. Finally, larger vocabulary gains are found
when parents read at home and day care teachers read at school
than when reading occurs only at school (Whitehurst et al.,
1991).

Linguistic and Educational Risk in the Target Population:

Subjects were drawn from a sample of socioeconomically
disadvantaged families. Sadly, the state of North Carolina is
in need of dramatic improvements in the economic and educational
support provided for many of its young citizens. Nineteen
percent of the children in North Carolina are living below the
poverty level (NC State Data Center, 1987). In 1980, only 55% of
North Carolina adults over 25 had completed high school (National
Center for Education Statistics, 1988). In 1989, it was revealed
that NC high school students received the nation's lowest SAT
scores.
Differences in parental stimulation and child language skill
are thought to be at the heart of disadvantaged children's poor
performance on standardized tests and in school (Bereiter &
Englemann, 1966; Bernstein, 1972). However, children of
disadvantaged mothers who display stimulation styles

characteristic of advantaged families do not show achievement
problems (Farran, 1982). Research with low income black mothers
has shown highly stimulating patterns of verbal interaction;
however, easily available materials, such as advertisements and
comics are used more skillfully than conventional storybook
materials (Pelligrini, Perlmutter, Galda, & Brody, 1990). A
growing body of literature attesting to the importance of
parental interaction patterns, beliefs, and involvement in their
children's education shows that these variables have positive
effects on children's achievement when background factors such as
SES are controlled (Laosa & Siegel, 1982). Thus, by enriching
existing parenting skills, it is expected that the proposed
program will a measurable impact on children's language
competence.

Early oral language appears to play an important role in the
transition to literacy. In school-age children, reading
performance is correlated with all aspects of oral language skill
(Edmiaston, 1984; Loban, 1963; Snow, 1983). Early verbal ability
is also predictive of reading readiness and later reading
performance (Jansky & de Hirsch, 1972; Norman-Jackson, 1982;
Share, et al., 1983). Of particular relevance to this proposal
is the finding that frequency of reading aloud in the home
predicts future readiness and reading skills (Wells, 1985b).

It has also been suggested that disadvantaged children do
not necessarily perform poorly in school because they are
deficient in language skills. Rather, these children may differ
in the frequency with which they display the full scope of their
abilities, perhaps as a result of being unfamiliar with the
socialization practices and structure of the classroom (Heath,
1986; Farran, 1982). The enriched storytime routine provided in
this study will give children practice in exactly the types of
verbal interactions that may help them achieve success in school.
In summary, there is reason to believe that follow-up studies of
the subjects may reveal lasting effects of the storytime
intervention. While it would be unrealistic to expect this study
to act as a magic bullet in eliminating children's later
educational risk, the home storytime project may facilitate later
school performance by increasing early oral language ability.

Study 1: Background

The purpose of this study was to investigate individual
differences in home reading practices at baseline. Our goals
were twofold. First, to compare the characteristics of families
who engage in high vs. low rates of parent-child reading.
Second, to test a conceptual model of the determinants and
outcomes of reading aloud.

Reading aloud and social class

Reading aloud is a daily ritual in most middle class and
professional homes (DeBaryshe, in press; DeBaryshe et al., 1992;

Heath, 1983; Wells, 1985a). Less is known about low SES
families. Teale (1986) reported that only three of 24 low-SES
children in his sample were read to on a regular basis. Heath's
(1983) sample of working class African-American parents did not
read to their children, nor did the families own children's
books. Low-SES Caucasian parents in Heath's study did read
aloud, but not as often and with a less interactive style than
the professional parents she observed. In contrast, Hoff-
Ginsberg (1991a) reported no differences in the quality of book-
reading interactions in middle and working-class mother-child
dyads.

While the question of social class differences remains
unanswered, the question itself may be moot. Child outcomes are
better predicted by family process variables than by SES per se
(Gottfried, 1984; Ninio, 1990; Share et al., 1983). Process
variables such as parent-child interaction affect the child
directly and largely mediate any effects of social class.
Therefore process rather than SES should be the first focus of
inquiry. If process variables are closely related to SES, a
second question arises--why are the two linked.

Mothers' beliefs about reading to children

What determines whether parents read to their children, and
the kind of interaction style that parents adopt? Parental
belief systems may be the key to understanding individual
differences in parents' home reading behavior (Goodnow, 1988;
Goodnow & Collins, 1990; Miller, 1988; Sigel, 1985). A growing
interest in parents' beliefs is due, at least in part, to an
awareness that "accounts of socialization are incomplete without
attention to what parents consider they or their children are
doing" (Goodnow, 1988, p. 287).

Four general themes about beliefs have emerged in the
literature: (1) What is the nature or content of parents'
beliefs, (2) What are the origins of these beliefs, (3) How are
beliefs linked to action, and (4) What are the consequences of
parents' beliefs for children's development? (Goodnow, 1988;
Goodnow & Collins, 1990; Miller, 1988; Sigel, 1985).

The current study addressed all four of these issues. The
nature of mothers' reading beliefs was assessed by asking mothers
to report on their attitudes about cognitive stimulation,
language development, and joint reading. The questions of
origins, associated actions, and child outcomes were addressed by
proposing two hypothetical causal models. These models were
tested using path analytic procedures.

The models were built around three basic propositions.
First, maternal beliefs are determined in part from mothers' own
literacy skills and interests. Overall, maternal skills were
expected to show an overall positive association with beliefs.
However, a mother with low skills could also hold highly

facilitative beliefs. This proposition was tested by specifying direct paths from measures of education and maternal literacy to a measure of maternal beliefs. The coefficients for these paths were expected to be positive but moderate in magnitude.

The second proposition was that maternal beliefs are the most direct determinants of maternal behaviors. Two separate aspects of behavior were considered: (1) the history and current frequency of joint reading exposure and (2) mothers' joint reading style. These aspects of maternal behavior were investigated separately. In each analysis, a path was included from maternal beliefs to the respective measure of maternal behavior. No direct effects of maternal education or literacy skills on behaviors were expected; this association was thought to be completely mediated by maternal beliefs.

The third proposition concerned child outcomes. It was hypothesized that maternal reading behaviors have a direct effect on two aspects of children's skills. These child outcomes were: (1) children's interest in reading and (2) children's oral language skills. To test these hypotheses, direct paths from reading exposure to child reading interest and oral language skill were included in the first model. In the second model, a measure of reading style replaced reading exposure.

Positive affective and attitudinal consequences of reading aloud are important to consider. Read-aloud programs have increased children's interest in books and their initiation of independent reading (McCormick & Mason, 1986; Morrow et al., 1990). Greater enjoyment of reading could enhance children's skills in three ways. First, an enthusiastic child is more likely to elicit frequent reading from adults. Second, independent exploration of books could lead to self-directed learning. Third, a highly motivated child may derive greater benefit from adult instruction. Thus, a feedback loop may exist between reading stimulation, child interest, and language skills. We included this loop in our model by specifying an effect of children's reading interest on oral language skills. Paths from both maternal behavior and child interest to child language skill were included to represent both external and internal sources of influence on oral language abilities.

Method

Subjects

Subjects were 73 low-income children and their mothers living in a medium-sized city and nearby rural areas of the North Carolina Piedmont. The children attended Head Start or a developmental day care center. The data reported here were taken during the program baseline, before the reading intervention began.

The children's mean age was 47.6 months (range = 26 - 60). Fifty-two percent were boys and 48% were girls. Seventy-eight percent were African-American and 22% were Caucasian. Mothers' mean age was 26.5 years (range = 20 - 45). Twenty-three percent of the mothers had less than a high school education, 71% had completed high school and 6% had a four-year college degree. The majority (65%) were single parents, and 61% were employed full or part time. Most families lived at or below the poverty line, with a median income level of only $5-10,000 to support an average family size of 3.87 persons.

Measures

Instruments included two surveys administered to the mothers, standardized tests of children's language skills, and audiotaped samples of parent-child book reading. Surveys were administered orally to two mothers with limited reading skills. The Family Survey (FS) had 29 items concerning family demographics and past and current home literacy practices. The Reading Belief Survey (RBS) contained 41 items measuring maternal beliefs. Both surveys were designed by the author for this study; the FS is based on versions used in several previous investigations (DeBaryshe, in press; DeBaryshe, et al., 1992; Whitehurst et al., 1988).

Maternal education. Mothers' highest level of education completed was measured on a seven-point scale (1 = less than eight grade to 7 = college degree).

Maternal literacy. Mother's level of comfort and interest in reading was measured with a composite variable formed by summing three questions from the FS[1]. The questions were: "How often do you read for pleasure" (rated from 1 = never/rarely to 4 = daily/more), "How much do you enjoy reading" (1 = don't like to 4 = love it), and "How good are your reading skills" (1 = can't read to 4 = strong). High scores on the composite indicated higher literacy interest and skill.

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[1]For this and all other composite variables, contributing scores were first converted to z-scores, so that differences in variance would not have an undue effect on the resulting composite score.

        <u>Maternal beliefs</u>. Maternal beliefs about reading aloud were
measured using the RBS. The RBS was designed to assess attitudes
about what and how children learn from reading as well as
maternal self-efficacy as a teacher of her child. Questions were
written to tap seven areas: 1) Mothers' views on her role as a
teacher of school-related skills, 2) positive affect associated
with reading, 3) the value placed on children's active verbal
particpation when reading aloud, 4) the appropraiteness of direct
reading instruction, 4) whether children acquire moral
orientations or practical knowledge from books, 5) whether
limited resources are an obstacle to reading, and 6) the
malleability of language development.

        Mothers rated the degree to which they endorsed each item
using a four-point scale. Examples of items include: "Schools
are responsible for teaching children, not parents", "Reading
aloud is a special time we love to share", and "I read to my
child so he/she will learn the letters and how to read simple
words". Items were scored so that a high score reflected beliefs
that parents are important teachers, that the goals of reading
are enjoyment, knowledge, active child particpation and oral
language growth, that reading instruction per se is not yet
important, that limited resources should not prevent parents from
reading, and that language is influenced by environmental
stimulation. Principle components anlaysis indicated that the
RBS items formed a single-factor (eigenvalue = 4.19, percent
variance = 52) Maternal responses were therefore summed to form
a total score.

        <u>Reading exposure</u>. Children's degree of exposure to joint
reading was measured with five open-ended questions from the FS.
The questions were: "How old was your child when you started to
read to him/her", "How often do you read with your child or look
at books or magazines together", "How many stories do you usually
look at each time you and your child sit down to read", "How many
books does your child own" and "How often do you take your child
to the library". High scores on the composite indicated a higher
degree of reading exposure.

        <u>Reading style</u>. Half of the families were also asked to make
audiotapes of mother-child reading sessions at home. One reading
session per family was coded. The frequency of four categories
of maternal speech were counted: <u>questions</u>, <u>feedback</u> for
children's answers, questions or comments, <u>conversation</u> not
related to the child's speech, and <u>reads text</u>. Rater
reliabilities for these codes averaged .94.

        Variables were reduced to a single measure of reading style
using principal components analysis. As expected, a single
component emerged. Results supported the idea that maternal
reading style may be described as a single dimension ranging from
strictly text-focused to highly participatory. The component had
an eigenvalue of 2.58 and explained 65% of the variance in the

contributing variables. Loadings were .90 (feedback), -.84 (reads text), .79 (questions) and .67 (conversation).

   Child Interest. Children's interest in reading was measured with three questions from the family survey. Mothers were asked "How often does your child look at books on his or her own", "How often does your child ask to be read to" (both rated from 1=never/rarely to 4=daily/more), and "How much does your child enjoy being read to" (1=doesn't like to 4 = loves it).

   Child language skill. Children's oral language competence was measured using three norm-referenced instruments. The Peabody Picture Vocabulary Test-Revised (Form L) (Dunn & Dunn, 1981), the Expressive One-Word Picture Vocabulary Test (Gardner, 1981), and the verbal expression subscale of the Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy & Kirk, 1968) were used to assess receptive vocabulary, expressive vocabulary, and the semantic complexity of descriptive speech, respectively.

Results

Descriptive statistics on sample characteristics

   Descriptive statistics are shown in Table 1. Contrary to previous reports, a stimulation deficit model does not describe this sample of families. The majority of mothers provided regular joint reading experiences and also provided positive models of adult literate behavior.

Table 1: Means for family variables for sample, high- and low-
        reading frequency groups

Construct/Variable	Sample n=73	High-read n=23	Low-read n=23	p.
M. Ed Level[a]	4.58	5.13	4.00	.006[c]
Income Level[b]	2.74	2.73	2.65	ns
% Single Mothers	65.22	52.17	73.91	.008[c]
Family Size	3.87	4.30	3.65	.07[f]
Child Age (Mos.)	47.55	50.52	45.70	.02[f]
% Black	78.10	78.26	73.91	ns
% Employed	60.87	56.52	56.52	ns
% Grandparents Read to Mother	65.67	77.27	45.45	.03[c]

Construct/Variable	Sample n=73	High-read n=23	Low-read n=23	p.
M. Literacy				
Reading Frequency[c]	2.99	3.26	2.70	.09[c]
Enjoyment[d]	3.09	3.43	2.70	.002[e]
Skill[h]	3.25	3.52	2.96	.009[e]
Reading Beliefs				
Total Survey Score	137.18	143.26	127.11	.001[f]
Reading Exposure				
Age Began (Mos.)	13.80	9.68	18.41	.02[f]
# Children's Books	21.44	36.88	7.76	.0001[f]
Read Aloud/Week	4.22	6.97	1.66	.0001[f]
Stories Read/Session	2.20	3.33	1.63	.001[f]
Library Trips/Mo.	2.02	2.83	1.43	.0001[f]
Reading Style[g]				
Questions/Min.	2.42	n/a	n/a	n/a
Feedback/Min.	1.81	n/a	n/a	n/a
Conversation/Min.	1.40	n/a	n/a	n/a
Reads Text/Min.	9.12	n/a	n/a	n/a
Child Reading Interest				
"Reads" On Own[c]	3.36	3.78	2.70	.0001[e]
Asks to Read Aloud[c]	2.96	3.26	2.48	.002[e]
Enjoys Reading Aloud[d]	3.48	3.78	3.18	.02[e]
Child Language Skill				
Peabody Picture Voc.	78.57	84.57	74.88	.09[f]
Expressive One-Word	84.43	89.62	80.00	.01[f]
ITPA Verbal Express.	37.77	39.48	36.87	ns

Note. [a] 1= <8th grade to 7 = college grad   [b]1=0-$5k, 2=$5-10K, etc.
[c]1=never/rarely to 4=daily/more [d]1=dislike to 4=love [e]Mann-Whitney U test
[f]T-test [g]Too few tapes from lows for group comparisons [h]1=can't read to
4=above average

Thirty-seven percent of the mothers reported reading for
pleasure on a daily basis, and an additional 30% read a few times
per week[2]. Almost three-quarters of the mothers rated themselves
as "liking" or "loving" to read. Fifty-one percent described
themselves as "average" in reading ability, and 38% rated
themselves as "strong". About 11% of the mothers rated
themselves as having weak reading skills; only one mother in the
sample was completely unable to read. Thus, most mothers

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[2]Statistics are based on valid n's. The missing response rate
was 5-7% for most variables.

HEAD START SAMPLE

(N=60)

Maternal Literacy → (.36**) → Beliefs
Education → (.28*) → Beliefs
Maternal Literacy ↔ (.27*) ↔ Education
Beliefs → (.50***) → Exposure
Exposure → (.58***) → Child Interest
Exposure → (.24) → Language
Child Interest → (.12) → Language
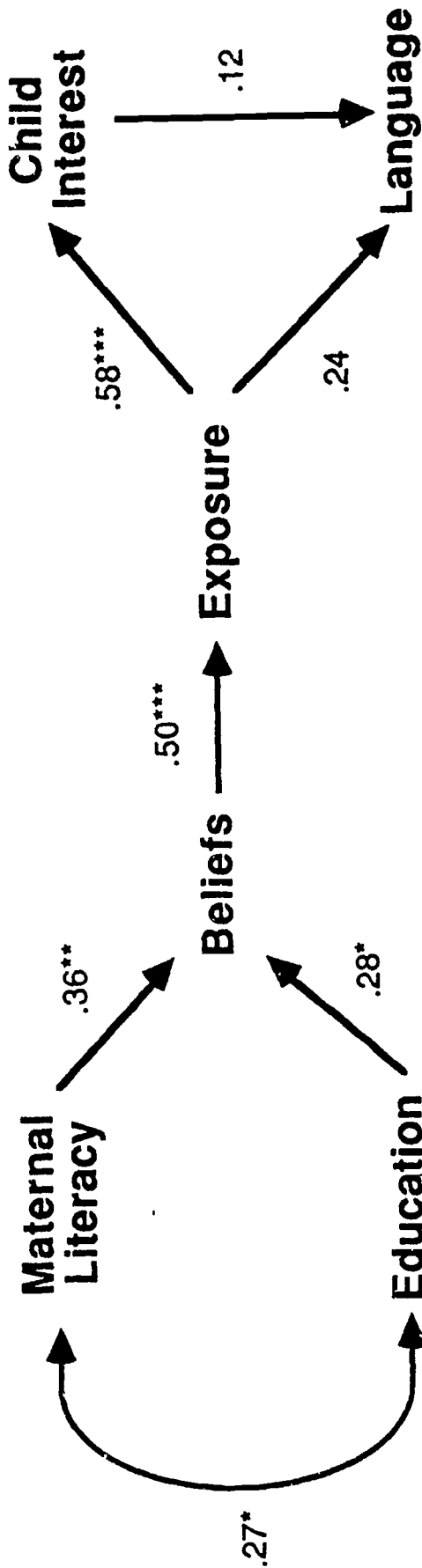
R^2

Beliefs	.26***
Exposure	.25***
Child Interest	.33***
Language	.11*

Figure 1. Model 1

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presented positive models of reading activity although a
substantial minority rated themselves negatively.

Mother's beliefs were congruent our a prioiri view of
facilitative reading. An average total score of 137.18 on the
RBS indicated a mean item score of 3.37. Thus, mothers tend to
agree, but not strongly agree with the views implicit in the
belief scale.

Most of the children had regular exposure to books. Mothers
reported starting to read aloud at an average age of 13.8 months
(SD = 11.5, range = 0 - 72) and currently read aloud 4.2 times
per week (SD = 4.10, range = 0 - 14), completing 2.2 books per
sitting (SD = 1.34, range = 0 - 6). Children owned an average of
21.4 books (SD = 23.2, range = 0 - 100) and 35% reported that
their children went to the public library at least once a month.

The children also showed an active interest in books.
Sixty-five percent of the mothers said their child "loves" to be
read to. Thirty-two percent of the children asked to be read to
on a daily basis; an additional 42% made this request a few times
per week. Finally, 85% of the children looked at books on their
own a few times per week or on a daily basis.

High vs. low reading frequency families

Families were separated into high and low reading exposure
groups based on a composite of joint reading frequency, number of
books owned, stories read·per sitting and age at which they began
to read aloud. Families in the upper vs. lower quartile for
reading exposure differed on almost all measures (see Table 1).
Mothers in low-reading families had less education, younger
children, and were more likely to be single parents. These
mothers were less likely to have been read to themselves as
children; showed less interest, enjoyment, and skill in reading;
and held less facilitative beliefs. Their children engaged in
less independent exploration of books, showed less enjoyment in
reading aloud, and had lower vocabulary skills.

Model 1: Reading exposure

Due to listwise deletion of subjects with missing data, the
n for this analysis was 60. Correlations among the variables in
the first path model are shown in Table 2. Results of the path
anlaysis are shown in Figure 1.

Table 2
Correlation matrix for Model 1

Variable	1	2	3	4	5	6
1. M. Education	1.00					
2. M. Literacy	.27*	1.00				
3. M. Beliefs	.37**	.43***	1.00			
4. Reading Exposure	.43***	.42***	.50***	1.00		
5. C. Interest	.31*	.43***	.61***	.58***	1.00	
6. C. Language	.33**	.00	.10	.31*	.26*	1.00

Note.   * p < .05   ** p < .01   *** p < .001
       n = 60

Overall, results were highly consistent with the original
hypotheses. Maternal education and literacy were modestly
related, and both were predictive of reading beliefs. Mothers
with more education (beta = .28, p. < .02) and a stronger
literacy orientation (beta = .35, p. < .004) had more
facilitative belief systems (R^2 = .25, F(2, 57) = 9.80, p. <
.0002). Beliefs were strongly related to reading exposure.
Mothers with more facilitative beliefs provided their children
with broader and more frequent reading experiences (beta = .50,
R^2 = .25, F(1, 58) = 19.42, p. < .0001).

In terms of child outcomes, degree of reading exposure was
positively associated with children's reading interest (beta =
.58, R^2 = .33, F(1,58) = 29.08, p. < .0001). Reading exposure
and child interest were both significantly correlated with child
language skill. However, due to the high degree of shared
variance between reading exposure and child interest, neither of
these two predictors explained unique variance in language skill
(betas = .12 and .22, p.'s < .44 and .12, respectively).
Overall, the model accounted for 11% of the variance in language
skill (R^2 = .11, F(2, 57) = 3.39, p. < .04), suggesting that a
modest proportion of individual differences in oral language are
a function of home reading practices.

Model 2: Reading style

The second path model was identical to the first, except
that reading exposure was replaced with the measure of mothers'
reading style. Only subjects assigned to the parent training and
reading-only groups were asked to audiotape their baseline
reading interactions. With listwise deletion of cases with
missing data, the n for this analyses was reduced to 31.
Correlations between the variables and results of the path
analysis are presented in Table 3 and Figure 2.

HEAD START SAMPLE (N=31)
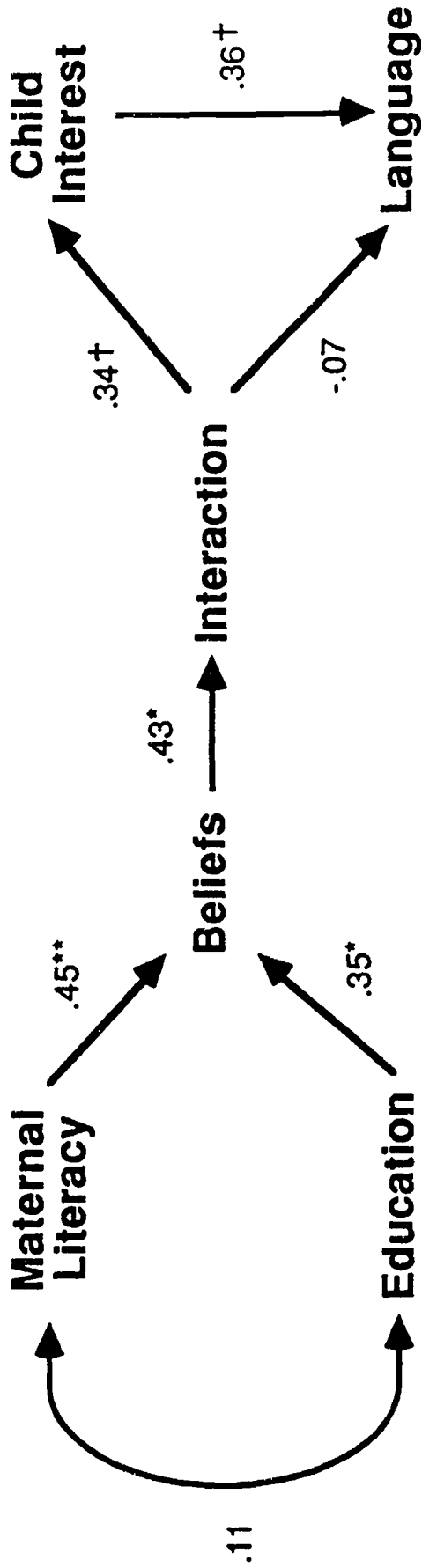
Figure 2. Model 2

Table 3
Correlation matrix for Model 2

Variable	1	2	3	4	5	6
1. M. Education	1.00					
2. M. Literacy	.11	1.00				
3. M. Beliefs	.40*	.49**	1.00			
4. Reading Style	.42*	.28	.43*	1.00		
5. C. Interest	.32+	.28	.50**	.34+	1.00	
6. C. Language	.29	-.19	.11	.05	.33+	1.00

Note. + p < .10   * p < .05   ** p < .01
        n = 31

Again, the path analysis generally confirmed initial predictions. (Since fewer subjects contributed to this analysis, path coefficients differ in magnitude and significance from model 1 even for those portions of the models that contain identical measures.) Maternal education and literacy predicted maternal beliefs (betas = .35 and .45, p.'s < .03 and .006, respectively, R^2 = .36, $F(2,28)$ = 7.89, p. < .002). Most striking was the finding that beliefs predicted mother's interactive reading style (beta = .43, R^2 = .18, $F(1,29)$ = 6.48, p. < .02). Thus, the two models together indicate that maternal beliefs are significantly associated with both the frequency and quality of mothers' joint reading practices.

Greater participation and discussion during reading was marginally predictive of increased child interest (beta = .34, R^2 = .11, $F(1,29)$ = 3.78, p. < .06). And child interest, but not reading maternal style showed a marginal association with oral language skill (betas = .36 and -.07, p.'s < .07 and .70, respectively, $F(2,28)$ = 1.83, p. < .18). Perhaps due to the reduced n, the second model did not explain a significant proportion of variance in children's language skill.

Study 1: Discussion

This investigation of family background characteristics and home reading practices at baseline revealed several important points. First and foremost, it cannot be said that our sample of mothers, considered as a whole, are depriving their children of potentially valuable reading experiences. On the average, mothers read with their children every other day, and most mothers provide consistent models of adult reading activity.

While these children tend to receive regular stimulation, one may ask whether they receive an optimal amount or kind of

stimulation. Compared to middle class and professional families
studied in our lab, these low-SES families read less often, owned
fewer materials, and started reading at a later age. For
example, college-educated, middle-income mothers from the same
locale reported reading 16 times per week, owning an average of
94 books, and starting to read when the child was five or six
months of age (DeBaryshe et al., 1992). The higher-SES mothers
also reported higher levels of maternal and child reading
interest, although the differences were larger for mothers than
for children. There also appeared to be small differences in
reading style associated with social class. The higher-SES
mothers asked more questions (34% more) and provided more
feedback (36% more) to their children when reading aloud. These
differences, however, may reflect an overall higher rate of
speech, as the high-SES mothers also engaged in more conversation
(by 21%) and reading of the text (19%).

In both low- and higher-SES samples, the frequency of home
reading, and to a lesser extent, the interactive quality of
mother-child conversation, were positively associated with oral
language skills. Thus, small differences in these aspects of
home reading stimulation may contribute to the larger differences
(one to two-and one-half standard deviations) seen on children's
standardized test scores.

A second issue to address concerns variation within our
target population. Within our sample, considerable variation was
found, with a substantial minority of our mothers (about 10%)
reporting low- to nonexistent joint reading and negative maternal
and child skills and attitudes. It may be that only a portion of
our sample are truly "at-risk", but this portion cannot be
neglected. Furthermore, our sample may not be representative of
all low-SES homes in general. Our response rates were 75% to 50%
across centers. We do not know whether responders differed
systematically from mothers in the same classrooms who did not
participate even in the baseline assessment. In addition, we do
not know the extent to which families who have a child in Head
Start or a developmental child care setting may be more or less
educationally-oriented than families of children who are not so
served.

In sum, our data reveal the importance of crediting mothers
for the positive learning experiences they do provide. This does
not remove our concern, however, for those children who are not
exposed to reading by their families.

Both the comparisons of high- vs. low-reading families and
the path models have several implications for intervention.
First, low reading frequency families differ on several
dimensions ranging from the mother's own childhood experiences,
to her current skills and beliefs, to her child's skills and
enthusiasm. This suggests a network of related risk variables
that could serve as targets for intervention.

The path models suggest that intervening at the level of
maternal behavior, namely reading frequency and reading style,

should have the most direct effects on child outcomes. However, individual differences in maternal and child skills are likely to interact with intervention effectiveness. In particular, the strong role of maternal belief systems suggests that intervention efforts must be designed to address parents' values and goals. Program goals and methods must either mesh with pre-existing participant values, or the program must directly attempt to change parents' values in the direction of greater program-participant congruence.

Study 2: Background

Reading aloud to young children is positively correlated with oral language skills, emergent literacy, and later reading performance in elementary school. However, there is surprisingly little experimental data designed to test hypotheses about the mechanisms through which reading aloud affects children's development. We studied the effects of increasing the frequency versus increasing the frequency and the interactive quality of parent-child story-reading.

Outcomes associated with frequent joint reading

Correlational research suggests that the frequency of reading aloud is positively associated with both concurrent and later language and literacy skills. For example, DeBaryshe (in press) found that parents who began to read to their children at an early age had children with larger vocabularies at age two. In a second study, a composite variable representing the age of reading onset, current frequency of joint reading, and exposure to a variety of book titles correlated .52 with a composite measure of children's tested oral language skills (DeBaryshe et al., 1992). Share et al. (1983) found that reading frequency is positively associated with four-year-olds' vocabulary, syntax and print awareness. Finally, in the Bristol language study the frequency of reading aloud between ages one and three was associated with oral language and reading readiness at age five and with reading comprehension at age seven (Wells, 1985b). Of all the home teaching activities followed in Wells' study, only reading aloud predicted later reading achievement.

Thus, ample evidence suggests that exposure to books and adult-mediated reading experiences is related to advances in language and early literacy skills. What remains to be understood are the specific mechanisms through which such effects are realized.

The importance of verbal interaction during story-reading

We hypothesize that the content and structure of adult-child discussion of books they read is a crucial aspect of the reading process. The theoretical basis for this claim comes from social

learning and constructivist theories. From a social learning
perspective, the most rapid changes in behavior are expected when
there is frequent modelling, practice, and immediate feedback in
the use of emerging skills (Kaye, 1979; Moerk, 1983; Whitehurst &
DeBaryshe, 1989). The Vygotskian or constructivist perspective
maintains that learning occurs in the context of shared
meaningful activities, of which picture-book reading is an
example. According to Vygotsky, adults structure shared
activities so that children produce more complex behaviors than
they could on their own, creating a zone of proximal development
(Vygotsky, 1978). Adults gradually yield responsibility for the
interaction until the child is able to function independently.
Combining these two views, we expected that the largest gains
will be seen when adults achieve shared meaning with the child,
request frequent and complex verbal participation, give
supportive and informative feedback, and give the child an
increasingly active role.

Parents spontaneously follow many of these principles.
First, parents provide more sophisticated language models during
story time than during caretaking activities or free play (Hoff-
Ginsberg, 1991a). Second, parents engage in intensive vocabulary
teaching and drill. Parents name and describe items and actions
in the book, ask a variety of questions, and give consistent
feedback for their child's responses (Bus & van IJzendoorn, 1988;
Ninio, 1983; Pelligrini et al., 1985; Pelligrini et al., 1990).
Third, parents adjust their reading behavior to their child's
ability. Interaction strategies vary as a function of child age
(Wheeler, 1983; Bus & Van IJzendoorn, 1988), language
handicapping status (Pelligrini, et al., 1985), knowledge of
specific vocabulary items (Ninio, 1983), and the type and
familiarity of reading materials used (Snow, Nathan, & Perlman,
1985; Pelligrini et al., 1990).

The most compelling evidence on the effects of parental
story time speech comes from a series of related experimental
studies. In three separate studies, adults learned specific
questioning and feedback strategies to use while reading aloud
with their two- and three- year-old children. Significant
changes in children's tested vocabulary skills were found
(Whitehurst et al., 1988; Whitehurst, et al. 1991;
Valdez-Menchaca & Whitehurst, in press).

Discussion of stories is also related to emergent literacy.
Part of this link may be due to oral language benefits accrued,
since language skills, especially comprehension, are consistently
associated with reading proficiency (Loban, 1963). Active
discussion when reading aloud is related to improvements in 1)
understanding of story structure, 2) the degree to which oral
reading attempts are print-governed, 3) awareness of a variety of
reading materials, titles, and authors, and 4) frequency of
independent reading (Morrow, O'Connor, & Smith, 1990).

Contextualization of reading discussion is also associated with higher print awareness (Hayden & Fagan, 1987).

The number of controlled experimental studies that investigate the impact of reading aloud with low SES children is small, but growing. When teachers provide daily, small-group reading activities, significant gains are seen in terms of children's verbal participation in reading sessions, story comprehension, protoreading attempts, and tested vocabulary skills (Morrow, 1988; Morrow, O'Connor, and Smith, 1990; Valdez-Menchaca & Whitehurst, in press). Home-based programs have also shown positive results. For example, Highberger and Brooks (1973) and Swinson (1985) encouraged home reading through book-lending programs in preschool classes. In both studies children showed significant vocabulary gains. Finally, reading at both home and day care results in larger vocabulary gains than when reading occurs only at day care (Whitehurst et al., 1991).

The current study

We tested the efficacy of a home-based reading program for preschoolers in compensatory early education classes. From a theoretical perspective, we wanted to better understand how book-reading affects children's skills. From a practical perspective, we wanted to see if parents can be effective change agents using an enjoyable, natural learning activity. If home reading programs can be implemented with relative ease, they represent a powerful resource for empowering family involvement in children's learning.

We used a three-group design. A control group of parents made no changes in their home reading practices. A reading group and a parent training group were both asked to read on a daily basis; we expected this to represent an increase in reading frequency. We taught the training group a variety of verbal stimulation techniques designed to increase children's participation in joint reading and enhance oral language skills. To the extent that parents used these techniques, we could then compare the relative contributions of increased reading frequency and changed interaction quality. Potential outcomes were assessed in both proximal and distal settings. First, we observed parent-child book-related conversation. More generalized outcomes were measured by children's performance on a battery of standardized language and literacy tests. We hypothesized that the training group would show changes in reading interaction while the reading group would not, and that test scores at the end of the program would be lowest for control subjects, intermediate for the reading group, and highest for the training group.

Methods

Subjects

Subjects were 55 low-income children and their primary caretakers living in a medium-sized city and nearby rural areas of the North Carolina Piedmont. Families were recruited through one county-wide Head Start program and a developmental child care center. Children were either enrolled in Head Start (n = 46), attended the developmental preschool (n = 6), or were younger siblings of Head Start enrollees (n = 3). The sample included 29 boys and 26 girls. The children's mean age was 49.1 months (range = 29-60 mos.). Seventy-three percent of the children were African-American and 27% were Caucasian.

Families lived at or below the poverty line, and most could be described as working poor. Thus, our sample was characterized by the severe economic and social stresses that are increasingly represented in young, single-parent, and minority households. All but two of the adults were the children's biological mothers; two were custodial grandparents. Mothers' mean age was 27.1 years (range = 20 to 45 yrs.). Eighteen percent of the mothers had less than a high school education, 69% completed high school, and 7% had a college degree. Forty-six percent were employed full-time and 9% worked part-time. More than half of the mothers (55%) were single parents, attempting to support their family (mean size = 4.1 people) on a median income of $10-15,000.

Measures

Measures included a survey administered to the mothers, reading logs, standardized tests of language and literacy skills, and audiotape samples of parent-child reading interactions.

Family Survey. A twenty-nine item survey, designed for this study, was administered to the mothers to collect data on family demographics and their past and current home literacy practices.

Oral language battery. Children's language skills were tested using the Peabody Picture Vocabulary Test-Revised (PPVT) (Dunn & Dunn,1981), the Expressive One-Word Picture Vocabulary Test (EOW) (Gardner, 1981), and the Verbal Expression subscale of the Illinois Test of Psycholinguistic Abilities (ITPA) (Kirk, McCarthy, & Kirk, 1968). These norm-referenced instruments were used to assess receptive vocabulary, expressive vocabulary, and the semantic complexity of children's descriptive speech, respectively. Alternate versions of the PPVT and EOW were given at pretest and posttest. No alternate form of ITPA was available; the same test was administered pre and post.

Literacy Battery. Emergent literacy skills were assessed using two instruments: the Test of Early Reading Abilities-2

(TERA) (Reid, Hresko, & Hammill, 1989), and a structured story telling task (Mistry & Herman, 1991). The TERA is a norm-referenced measure that taps age-appropriate skills. Examples of items include recognizing common logos, distinguishing letters and numbers, and indicating where printed sentences start and stop. The story telling task measured children's understanding of conventional story structure (e.g., setting, characters, problem, resolution). Children made up a story to go along with a set of pictures. Stories were scored for the number of structural elements and overall cohesion.

Audiotapes of home reading sessions. Audiotapes of home reading sessions were coded for the frequency and sequence of various categories of parent and child speech. Definitions of the coding system are given in Table 4. Parent speech codes included six different question types (yes/no questions, what-questions, function/attribute-questions, completion prompts, open-ended questions and distancing questions), five feedback strategies (repetition, praise, correction, expansion, and topic continuation), and the additional categories of reading the text, noncontingent conversation, nonword vocalizations, and other.

Table 4

Brief definitions of audiotape codes

Parent Speech Categories	Brief Definition

Prompting Strategies:

Yes/No Question	Request for which a yes or no response is appropriate.
What Question	Request for a specific name or label
Attribute Question	Request for information about an attribute e.g., size, color, shape, function, emotional state, location, number, action).
Completion Prompt	Adult begins a sentence and pauses,waiting for child to finish it.
Distancing Question	Request for information that goes beyond immediately present evidence. Includes why questions, asking for inferences about future events, drawing comparisons between the text and the child's experience and asking for a verbal definition.
Open-Ended Prompt	Request for information that does not specify or constrain a child's response.

Feedback Strategies:

Repetition	An exact or reduced copy of preceding child utterance.
Praise	Reinforcement or acceptance of child's utterance.
Criticism/Correction	Explicit correction or nonacceptance of child's utterance.
Expansion	Enlarged imitation of child's utterance.
Topic Continuation	Maintaining topic of child's utterance without preserving its form.

Miscellaneous:

Reading	The parent reads from the text.
Vocalization	Nonword sound or unintelligible.
Conversation	Providing information not contingent on child speech.
Other	Behavior management; speech directed to a third person or not otherwise codeable.

Child Speech Categories	Brief Definition

Dimension 1: Length

Vocalization	Nonword sound or unintelligible.
Word	Single meaningful word.
Phrase	Multi-word utterance.

Dimension 2: Spontaneity

Repetition	Exact or reduced copy of adult's speech.
Elicited	Nonrepetitive speech direct response to an adult's request.
Spontaneous	Nonrepetitive speech that is not directly elicited.

Dimension 3: Pragmatics

Naming	Child provides name or label.

Describe	Child provides a description.
Information Request	Child requests verbal information from adult.
Other	Not otherwise codeable.

Each child utterance was coded along three dimensions: (1) length (<u>vocalization</u>, single <u>word</u>, or multiword <u>phrase</u>), (2) spontaneity (direct <u>repetition</u> of the parent, <u>elicited</u> by the parent, or <u>spontaneous</u> contribution), and (3) pragmatic content (<u>name</u>, <u>description</u>, <u>information request</u>, or <u>other</u>). Children's utterances were transcribed for the purpose of computing MLU. MLU was computed as the mean number of words per utterance. We based our MLU on words rather than morphemes because most families spoke Black English.

Since reading sessions varied in length, all variables except MLU were expressed as rates per minute. Two coders independently scored 16 audiotapes (18% of the data base). Rater reliability for session totals for each speech category was computed using the interclass correlation coefficient (ICC) (Bartko, 1976). The ICC is a correlation-based reliability statistic that, unlike Pearson correlations, corrects for differences in absolute frequency between coders. Reliabilities were high for all categories. The mean ICC for parent codes was .94 (range = .81 - .99) and for child codes was .94 (range= .82 - .99).

<u>Reading logs</u>. Training and reading group parents kept a calendar on which they marked the number of books read each day and when an audiotape was recorded.

Procedure

Children were recruited from eleven classrooms located in nine centers. Centers were randomly assigned to one of three groups: parent training, reading, or control. Because of differential subject attrition from the parent training group a second wave of data was collected. All subjects (n = 5) in the second wave were assigned to the training group.

All parent meetings, training sessions, and testing were done at the centers. Survey information was collected from parents at an initial meeting. Children were pre- and posttested by trained graduate or undergraduate research assistants.

The study was lasted seven weeks. One week of baseline was followed by a six-week intervention. Control families participated in the pre- and posttesting only. The parent training and reading groups were asked to read to their children daily. These parents were provided with books, audiotape recording equipment and reading logs; they were asked to keep a

record of the number of books read and to audiotape two reading
sessions per week. The reading group was given no instructions
to change the content of their reading sessions. The parent
training group was given two training sessions at weeks two and
five. The first week served as a baseline, to assess the content
of families' reading interaction before we instructed training
group parents to alter their reading style.

Content of parent training

    Sessions began with a discussion and demonstration of the
target teaching strategies by the senior experimenter and a
research assistant. This was followed by role-playing in which
the parents took turns in both child and adult roles. Written
handouts summarizing the target techniques were provided.

    In lesson one, parents were introduced to a hierarchy of
prompts. Parents were to select easier prompts at first, and
then increase the level of demand in tune with their child's
ability to respond. We told parents of younger children to focus
on what-questions, attribute-questions, and completion prompts
and parents of older children to emphasize distancing questions.
All parents were to praise each contribution their child made and
to use only positive forms of correction.

    The questions taught in lesson 1 can be roughly placed on a
continuum from low to high demandingness for the child. The
least demanding questions were what-questions, where the child is
asked to produce nominal labels. Function/attribute questions
and completion prompts are more difficult. Function/attribute
questions require a descriptive response (e.g., giving the use,
physical characteristics, actions, emotions, or location of a
character or object). Since descriptive terms appear later in
children's vocabularies than basic nominals, attribute questions
are generally more challenging than naming questions. Completion
prompts are fill-in-the-blank cues in which the adult starts to
read a sentence and pauses, waiting for the child to finish.
Completion prompts give the child responsibility for telling the
story, but the response is still structured to the extent that
the child is expected to provide a recitation or close
approximation of familiar passages from the book. Distancing
questions require the child to go beyond the information
immediately present in the text or pictures (e.g., to predict
what will happen next, to compare something in the book with
their own experiences, to provide a verbal definition).
Distancing questions are the most difficult in terms of the
demands made on the child for representational thinking
(Pelligrini et al., 1985).

    In lesson 1, parents were also taught to give immediate,
supportive feedback. Feedback was kept simple; our goal was to
get mothers in the habit of giving frequent positive responses.
Praise plus direct repetition of the child's speech was used to

provide motivation and confirmation that the child's utterance
was acceptable. Positive forms of <u>correction</u> were also used.

In lesson 2, parents were told to use open-ended questions.
<u>Open-ended prompts</u> are general cues for child participation
(e.g., "Tell me about this page") and are not test questions in
the sense that the child is left free to select the content or
topic of his or her response. Such nondirective strategies are
thought to be more beneficial then specific questions because 1)
the child may be more motivated to respond (Olsen-Fulero &
Conforti, 1983) and 2) greater independence of thought is
required (i.e, the child may generate and choose from a variety
of appropriate responses).

More informative feedback strategies were also targeted.
Parents of younger children were told to replace simple praise
with expansion of their child's statements. Parents of older
children were told to use topic continuations. <u>Expansions</u> are
elaborated repetitions of the child's utterance that incorporate
and enlarges upon what the child says. Since the child's
utterance is used in a more complex sentence, the differences
between the child's and adult's forms are made salient. Children
tend to imitate adult's expansions and later use the expanded
forms in generative ways (Newport, Gleitman, & Gleitman, 1977;
Nelson, Carskaddon, & Bonivillian, 1973; Scherer & Olswang,
1984). <u>Topic continuations</u> are utterances that incorporate the
semantic topic of the child's speech without using the child's
form or vocabulary. Frequent use of topic continuations is
associated with accelerated language gains (Nelson, Bonivillian,
Denninger, Kaplan, & Baker. 1984). Topic continuations are
appropriate with older preschool children. As children's
utterances become more varied, lengthy, and complex, expansion is
a less natural form of response and adults rely more heavily on
semantically contingent but structurally dissimilar replies.

Results

Subject attrition

Of the 73 families originally recruited, 55 completed the
protocol. Most attrition occurred during the baseline period.
Attrition was highest in the parent training group and was much
lower among Head Start participants. Drop-out families differed
significantly from completers in the following ways: The drop-
out families had lower incomes (median in the $5-10,000 range vs.
$10-15,000), $\underline{t}(66) = 2.24$, $\underline{p}.$, $< .03$, had larger households ($\underline{M} =$
4.08 vs. 3.23), $\underline{t}(67) = 2.68$, $\underline{p}. < .01$, tended to have younger
mothers ($\underline{M} = 23.7$ vs. 27.09 years), $\underline{t}(50) = 1.89$, $\underline{p}. < .06$, owned
fewer children's books ($\underline{M} = 6.46$ vs. 26.00), $\underline{t}(58) = 2.293$, p. <
.005, tended to read fewer stories at one sitting ($\underline{M} = 1.55$ vs.
2.33), $\underline{t}(51) = 1.70$, $\underline{p}. < .10$, and had children rated by their
mothers as showing less enjoyment in joint reading ($\underline{M} = 3.09$ vs.
3.61 on a 4-point scale), $\underline{t}(67) = 2.88$, $\underline{p}. < .005$, and as asking
to be read to less often ($\underline{M} = 2.41$ vs. 3.13 on a 4-point scale),

$\underline{t}(66) = 2.47$, $\underline{p}. < .02$. Noncompleting children also had lower scores on the Illinois Test of Psycholinguistic Abilities, ($\underline{M} = 34.00$ vs. 38.89), $\underline{t}(68) = 2.23$, $\underline{p}. < .03$.

Home reading data

Parents in the training and reading groups did not increase their frequency of reading during the study. Families listed an average of 4.43 stories per week in their reading logs, the same as their pretest estimates. On the average, families completed 1.19 tapes per week. There were no group differences between the parent training and reading conditions in terms of reading or taping frequency.

Means and standard deviations for the audiotape data are presented in Table 5. Only data from families who returned at least one audible tape from the weeks corresponding to the baseline, lesson 1 and lesson 2 time periods are included (n = 23).

Table 5

Mean and Standard Deviations for Parent and Child Audiotape Data

Variable		Parent Training			Reading	
	Baseline	Lesson 1	Lesson 2	Baseline	Lesson 1	Lesson 2
			Parent Speech			
Reads Text	7.85 (2.91)	5.96 (4.64)	5.67 (4.01)	9.67 (4.37)	10.97 (6.34)	12.39 (3.99)
Total Target Prompts	2.10 (2.25)	4.88 (3.04)	3.34 (2.41)	1.87 (1.67)	1.11 (2.18)	.81 (1.34)
What-Q	.63 (.89)	2.77 (2.05)	1.45 (1.65)	.78 (.79)	.54 (1.13)	.28 (.38)
Attribute-Q	.92 (1.56)	1.77 (1.15)	.96 (.88)	.65 (.75)	.40 (1.05)	.37 (.95)
Completion prompt	.37 (.53)	.21 (.43)	.24 (.51)	.17 (.28)	.18 (.25)	.05 (.09)
Open-ended	.02 (.19)	.08 (.15)	.36 (.54)	.18 (.26)	.04 (.09)	.06 (.15)
Distancing-Q	.08 (.25)	.05 (.08)	.33 (.65)	.09 (.20)	.02 (.05)	.06 (.11)
Total Target Response	2.26 (1.82)	3.39 (1.75)	3.74 (2.86)	1.79 (.84)	2.39 (2.90)	1.53 (2.37)
Praise	1.01 (1.09)	1.39 (1.10)	1.38 (.93)	.74 (.56)	.84 (.93)	.53 (.71)
Criticism/Correction	.14 (.17)	1.02 (.74)	.46 (.47)	.26 (.36)	.21 (.35)	.08 (.13)
Repetition	.40 (.57)	.41 (.74)	.32 (.54)	.08 (.81)	.20 (.50)	.15 (.28)
Expansion	.15 (.19)	.18 (.25)	.47 (.62)	.16 (.16)	.11 (.22)	.15 (.33)
Topic Continuation	.56 (.48)	.93 (.94)	1.10 (1.22)	.55 (.45)	1.02 (1.53)	.63 (1.24)
Yes/no Questions	.78 (.79)	.83 (.60)	.98 (.90)	1.17 (.79)	.85 (.88)	.47 (.51)
Vocalization	.29 (.29)	.46 (.56)	.45 (.46)	.39 (.42)	.29 (.35)	.16 (.20)
Conversation	1.22 (.78)	1.42 (1.29)	1.68 (1.17)	1.24 (1.79)	.93 (.65)	.72 (.58)
Other	.49 (.49)	.56 (.46)	.60 (.50)	.68 (.66)	.43 (.38)	.36 (.54)

(table continued)

| Variable | Parent Training | | | Reading | | |
	Baseline	Lesson 1	Lesson 2	Baseline	Lesson 1	Lesson 2
			Child Speech			
Length						
Vocalization	.99 (.94)	1.16 (.62)	.99 (.67)	1.30 (1.61)	.90 (.87)	.73 (.73)
Word	2.30 (2.19)	3.83 (2.81)	2.82 (2.76)	1.83 (1.59)	1.13 (1.13)	1.12 (1.06)
Phrase	4.85 (3.66)	4.97 (1.67)	5.18 (2.92)	3.11 (1.30)	3.36 (2.98)	2.98 (2.33)
MLU	2.70 (.86)	2.61 (.85)	2.96 (.99)	2.94 (.74)	3.04 (.74)	2.54 (1.27)
Spontaneity						
Repetition	2.61 (3.57)	1.44 (1.24)	1.00 (.90)	.58 (.57)	.35 (.37)	1.09 (1.89)
Elicited	1.73 (1.82)	4.10 (2.55)	3.52 (3.09)	2.02 (1.64)	1.25 (1.97)	.98 (1.45)
Spontaneous	2.80 (1.66)	3.26 (2.09)	3.49 (2.57)	2.35 (1.66)	2.86 (2.98)	2.05 (2.33)
Pragmatic Content						
Name	1.27 (1.12)	2.91 (2.81)	2.23 (2.61)	1.03 (1.00)	.50 (.93)	.60 (.59)
Description	4.47 (4.21)	3.97 (1.99)	3.15 (2.12)	2.54 (1.86)	2.45 (1.91)	2.35 (2.14)
Info Request	.58 (.50)	.97 (1.10)	1.04 (1.29)	.47 (.24)	.74 (1.05)	.65 (.96)
Other	.80 (.84)	.96 (.56)	1.59 (.99)	.91 (.56)	.76 (.66)	.51 (.54)

Data were analyzed using a series of 2 (Group: parent training vs. reading) X 3 (Time: baseline, lesson 1, lesson 2) MANOVAs with time as a within-subjects factor. The first analysis was conducted on the categories of parent speech targeted in training. Parents in the reading group did not spontaneously use many of the target strategies. To avoid a predominance of zero values for this group, we created two new variables--target prompt and target response. Target prompt was the sum of what-questions, attribute-questions, completion prompts, open-ended prompts and distancing questions. Target response was the sum of praise, correction, repetition, expansion, and topic continuation. Thus, three multiple dependent measures were used--target prompt, target response, and reads text. Significant multivariate effects were found for Group, $F(3,19) = 4.99$, $p. < .01$, and for the Group X Time interaction, $F(6,80) = 2.73$, $p. < .02$. Treatment affected parents' behavior in the expected way; the groups looked similar at baseline, but began to diverge during the intervention periods.

Univariate follow-up tests yielded a Group X Time interaction for target prompts, $F(2,42) = 6.23$, $p. < .01$, and a marginal interaction for reads text, $F(2,42) = 2.43$, $p. < .10$. Marginal effects of Group, $F(1,21) = 3.45$, $p. < .08$, and Time $F(1,42) = 2.95$, $p. < .06$, were found for target responses. Post-hoc comparisons showed that training and reading parents did not differ in their frequency of target prompts during baseline; the training group used significantly more target prompts than the reading group during the two lesson periods. Direct reading of the text also followed the expected pattern. The groups were

equivalent at baseline, then the training group tended to do less straight reading during intervention. The marginal univariate effects for target response suggest that training parents were somewhat more responsive overall and both groups tended to be most responsive during lesson 1.

A MANOVA on nontargeted parent speech (yes/no-questions, conversation, vocalization, other) was nonsignificant. Treatment had no effects on the categories of parent speech not specifically addressed in the reading curriculum.

Group X Time MANOVAs were conducted separately for each of the three dimensions of child speech. Thus, the MANOVA for the length dimension had four dependent measures (vocalizations, words, phrases, and MLU), the MANOVA for the spontaneity dimension had three dependent measures (repetition, elicited, spontaneous), and the MANOVA for the pragmatics dimension had four dependent variables (name, describe, information request, other).

Significant or marginal multivariate effects were found for length, Group $F(4,18) = 2.76$, $p. < .06$; Group X Time $F(8,78) = 1.87$, $p. < .08$; spontaneity, Group $F(3,19) = 2.86$, $p. < .06$, Group X Time $F(6,80) = 2.47$, $p. < .03$; and pragmatic content, Group $F(3,19) = 2.61$, $p. < .08$. Univariate follow-up tests and post-hoc comparisons indicated that training group children used more words, Group X Time $F(2,42) = 3.98$, $p. < .03$, more elicited speech, Group X Time $F(2,42) = 5.69$, $p. < .01$, and did more naming, Group X Time $F(2,42) = 4.30$, $p. < .02$, during the lesson 1 and lesson 2 time periods than did the reading group children. Training group children used more phrases at all three time periods, Group $F(1,21) = 5.54$, $p. < .03$. and used more repetition overall than reading children, Group $F(1,21) = 4.56$, $p. < .05$. There was also a trend for the training group to use less repetition over time; the groups did not differ on frequency of child repetition at lesson 2, Group X Time $F(2,42) = 6.37$, $p. < .09$.

Language battery

Means and standard deviations of the pre and posttest language battery are shown in Table 6. At pretest children scored slightly below national norms on the PPVT and EOW and slightly above national norms on the ITPA. The control group scored significantly higher than the parent training group on the pretest PPVT. Nonsignificant differences in the same direction existed for the EOW. Data for each test were analyzed using one-way ANCOVA's on group membership with pretest score as the covariate. When pretest abilities were controlled, there were no group differences on posttest scores for the PPVT, EOW, or the ITPA.

- Table 6

Mean and Standard Deviations for Language Test Scores

Variable	Parent Training[a]		Reading[b]		Control[c]	
	Pre	Post	Pre	Post	Pre	Post
PPVT[d]	73.68 (14.76)	78.79 (15.21)	79.56 (11.93)	87.17 (13.73)	87.00 (10.84)	90.24 (13.53)
EOW[d]	80.26 (13.30)	89.00 (10.75)	85.33 (11.32)	92.11 (12.54)	88.12 (11.84)	98.06 (12.09)
ITPA[e]	35.95 (7.25)	40.95 (9.87)	40.94 (7.33)	43.56 (6.52)	40.00 (7.95)	46.82 (8.83)

Note: Means are listed first, standard deviations are in parentheses
[a] n = 19
[b] n = 18
[c] n = 17
[d] Scores based on expected mean of 100, SD of 15
[e] Scores based on expected mean of 36, SD of 6

Table 7
Means and Standard Deviations for Emergent Literacy Scores

Variable	Parent Training[a]		Classroom Control[b]	
	Pre	Post	Pre	Post
TERA	92.5 (15.37)	95.0 (8.39)	97.3 (14.5)	87.6 (13.96)
Story Elements	3.33 (1.63)	4.8 (3.35)	3.86 (1.68)	4.43 (1.27)
Story Cohesion	1.67 (.816)	2.4 (1.67)	1.71 (.756)	2.14 (.690)

Note: [a] n = 5   [b] n = 7
      Means are listed first, SD are in parentheses

Literacy battery

Means and standard deviations for the pre- and posttest literacy battery are shown in Table 7. Only the second wave of subjects received the literacy battery. The comparison group consisted of seven classmates whose parents had declined to be in the study. One-way ANOCOVAs controlling for pretest scores showed no group differences on the two storytelling task measures (number of key story elements mentioned or overall story coherence) or on the TERA. Adjusted posttest means of the TERA were 5.36 and -3.83 for the training and reading groups, respectively. Although the direction of the adjusted means favored the training group, the difference was not statistically significant (p = .125).

Discussion

The purpose of this study was to compare the effects of two changes in parent-child reading practices, namely encouraging

parents to read more often and encouraging parents to adopt a more stimulating reading style. Following social learning and Vygotskian theories, we instructed mothers to use a variety of verbal question and feedback strategies, to match their strategies to the children's ability and to give their children an increasingly active role in the story-reading process. Training resulted in significant changes while simple encouragement did not.

This brief intervention was highly effective in bringing about changes in the training group's interactive reading strategies. When mothers came to understand the importance of soliciting children's participation, the focus of their reading sessions moved away from verbatim reading of the text. More collaborative discussion was seen. Training group mothers decreased their straight reading of the text by 25%, doubled their use of target questions, and increased their responsiveness by 65%. Children becoming more verbally active. Training children showed 70% less direct repetition of the parent. They more than doubled their rates of elicited speech, providing answers to their mothers' questions and prompts. They doubled their rate of naming items in the book, and increased their rate of words by 45%.

In listening to the tapes of the reading sessions, we also saw changes in the gestalt of the interaction that are not captured in our coded data. During baseline mothers often read in a halting or uncomfortable manner, making few deviations from the printed text. Children listened quietly or repeated along as the mother read. Children's comments and questions were often ignored and sometimes openly discouraged.

During the lesson periods, a more collaborative and positive style emerged. At first mothers sounded stilted. With practice, the flow of question-response-feedback sequences improved, conversations were more varied, and the switch between reading and discussion was more smooth. Mothers seemed more sensitive to their children and more willing to let children guide the conversation.

Two excerpts from the audiotapes illustrate these differences. The first was taken during baseline and involved a three-year-old boy. The mother read the book line-by-line. There were no spontaneous questions, comments, or expressions of approval during the session. At first, her son recited along with her, but he soon lost his enthusiasm. At the end of the session, the mother was determined to finish the book.

```
M: Come
C: Come
M: A' (pronounced like the letter name)
C: A'
M: 'Gain
C: 'Gain
M: To'
C: To'
M: 'Morrow
```

```
C: (no response)
M: 'Morrow
C: (No response)
M: (Sharply) Tomorrow
C: (No response)
M: (Sharply) Tomorrow!
C: (Mumbled) Tomorrow.
```

In contrast, a mother of one of our youngest subjects, a two-year-old girl, adopted a warm style of questioning and correction following lesson 1. She allowed her daughter to solicit information, and used the girl's prior knowledge in teaching a new word.

```
C: Who in the house?
M: I don't know.  It don't look like nobody's home.
C: The mama.
M: Yeah.  What else do you see?
C: A (unclear, sounds like swinging)
M: That's a fence.  That's a fence around the house.
   Anything else?
C: A tree.
M: Yeah, you see a little tree.  Them are little bushes.
   They're called little bushes.  They look like trees,
don't they?
(Mother and child giggle together.)
```

In sum, the audiotape data show that parents can be taught to provide important, stimulating reading experiences with only modest effort. We expect that these changes will maintain over time and that the dyad's increased collaboration, positive affect and conversational variety will be self-perpetuating. It is under these conditions that children gain the vocabulary skills, understanding of book conventions and love of joint reading that are the important foundations of emergent literacy.

While we saw clear effects of parent training on in vivo behavior, we did not see effects on the test battery. This result is similar to Morrow et al., 1990, who found that a classroom interactive reading program affected kindergarten children's story comprehension and story telling attempts, but did not change tested reading scores. One explanation for our test results is that the benefits of the Head Start program most of our subjects attended overshadowed smaller effects of the home reading. A second possibility is that our program was too short for changes on test scores to be seen. Significant test gains have been found, however, in studies of similar length (Whitehurst et al., 1988; Whitehurst et al., 1991; Valdez-Menchaca & Whitehurst, in press). Two of the Whitehurst studies had teachers as the primary readers. It has been suggested that intervention programs must involve parents but should not rely on them alone (Hoff-Ginsberg, 1991b). If the goal of a program is to build children's skills as seen on standardized tests, teachers, or teachers and parents together seem more effective than parents alone. Finally, age may important. The Whitehurst et al. studies had the strongest effects on two-year-olds. Perhaps shared reading primarily affects young children's

vocabulary, while older children, having more established lexicons, show other outcomes (e.g., understanding of story structure, attention to print).

From the applied perspective, we have shown that brief, low-cost efforts can have a significant impact on parents' reading style. A program such as ours, minus the evaluation component should be manageable in any early childhood classroom. However, it does appear that parents need instruction in specific reading strategies rather than general encouragement to read each day.

The mothers who completed the program believed in the importance of reading, and most read on a regular basis before joining the study. As a group, however, they did not achieve our goal of reading every day. Our mothers were single, working parents living under stressful conditions. They probably spent as much time and energy on the program as they could; additional reading may have been seen as an extra source of stress. The mothers read aloud less often, owned fewer books, started reading at a later age, and described their children as less interested in reading did parents in middle class and professional samples we studied (DeBaryshe, in press; DeBaryshe et al., 1992). Perhaps small differences in these areas have important cumulative effects.

Future research efforts should address the following issues. First, does daily reading have a significant advantage over less frequent but still regular reading? If yes, can busy parents make this commitment? Second, should the goals or the content of joint reading change developmentally? Goals in addition to or other than increasing conversation (e.g., promoting print awareness or using the story as a basis for a related activity) may be more developmentally appropriate as children enter their fourth or fifth years. Finally, there is the issue of differential participation. Not all families from our centers volunteered to be in the study, and our drop-out rate was somewhat high. It is likely that the families who most need encouragement to read and books to use were not captured or maintained in the program. Future endeavors must pay more attention to attracting and retaining all high-risk families.

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APPENDIX A

Related Work Presented, Published and In-progress

Manuscripts

DeBaryshe, B. D., Caulfield, M. B., Witty, J. P., & Holt, H. E. (1992). Early language experiences: Picture-book reading in the home. Manuscript submitted for publication.

DeBaryshe, B. D., Daly, B. A., & Rodarmel, S. L. (1992). Evaluation of a home read-aloud program for low SES mothers and children. Manuscript submitted for publication.

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STORYTIME LANGUAGE PROJECT
LESSON 1

Our General Goals

We want you to teach your child new words and concepts. We want your child to practice his/her knowledge by answering questions, talking about the pictures, and helping you tell the story. Quiet listening is NOT what we want. We want your child to be an active talker and partner in your storytelling.

Specific Goals for Lesson 1

Goal's for Your Child	Teaching Technique
1) Name new things in book	1) Naming-questions
2) Describe things he/she can already name	2) Attribute-questions
3) Help tell the story	3) Fill-in-the-blanks
4) Feel proud of him/herself for answering questions	4) Praise

In today's lesson, we will teach you to use naming questions, attribute questions, fill-in-the-blanks, and praise. You will use these four teaching techniques at home with your child.

Some kinds of questions are easier than others. Children learn to name new things before they learn to describe new things. We want your child to learn how to name new things in the pictures that he or she does not already know. For things that your child does know, we want him or her to start to describe these things; this is harder than simply naming them.

Naming questions ask your child to name a person, animal, or object. For example: "What is this?" "Who is this here?" "Tell me what you see here" "Who is in this picture?" "What is her name?"

Attribute questions are more advanced. An attribute word describes a person, place, thing, or event. Attributes include: Color, size, feelings, location, actions, age, shape, use, parts. Here are some examples of attribute questions.

"What color is the flower?"
"Where is Big Bird hiding?"
"Why is she crying?"
"What is Snoopy doing?"
"Is this the big bear or the little bear?"
"How many dolls does she have?"
"What do you do with a camera?"
"What kind of hat is he wearing?"

"What does a nurse do?"
"Snoopy smells a cake. What do you think he wants to do with it?"
"What does a dumptruck do?"

As your child gets to know the story, he or she may be able to help tell the story, even though your child can't read the printed words. Often books have phrases that get repeated over and over; your child will probably learn these quickly. Fill-in-the-Blanks are cues that you can use to have your child help tell parts of the story that he or she knows well. Start the sentence, and let your child finish. Some examples:

Parent: The big, bad wolf said, "I'll huff and I'll puff and...."
Child: I blow your house down.

Parent: This little monkey's name is ...
Child: Curious George.

When You Read

1. Do your best to read every day; the more often you read, the more your child will learn. It may help if you have a regular time and place to read together. If you can, let your child pick what book or books to read. Make sure you both are comfortable and that you both can see the pictures. Have your child sit next to you, or in your lap.

2. BEFORE you start reading, take a look at the book. What things in the pictures does your child know how to name? Are there things that your child does not know? Pick 20 things in the pictures that your child can name. Find 2 or 3 that are new to your child. These known and unknown items will be the focus of your questions.

3. When you come to things in the story that your child knows, ask your child to name that thing. Then, ask an attribute question.

4. When you come to things in the pictures that are new to your child, tell your child what it is. Then, for practice, ask your child to name the new thing for you.

5. Make a big deal out of your child's answers. Give lots of praise ("Right!" "Good for you" "He is hungry"). Smiles, nods, laughs, kisses, hugs, are all actions you can use along with verbal praise. Try to take notice of each answer your child gives. Make it very clear that you are listening and you are very pleased with your child's efforts. Play up your praise; children can't get enough of it.

6. Your child may give an answer that you were not expecting. That's fine, enjoy your child's creativity. If your child says something that is clearly wrong, don't scold him or her. Offer a correction, in a pleasant way. For example, "It looks like a lion, but it's called a tiger. Tigers have stripes."

7. As your child gets to know the story, give some fill-in-the-blank prompts. Again, praise your child's efforts.

8. Make a balance between reading the story and asking questions and fill-ins. Don't ask your child so many questions that reading becomes a chore for him or her. Two or three questions per page is good.

9. HAVE A GOOD TIME!. Don't be a bore when you read. Ham it up. Try changing your voice for the different characters. Use gestures if you want. If you act like you're having a lot of fun, your child will have fun too.

10. Avoid nagging or punishing your child during reading times. If your child misbehaves, try shutting the book for a few seconds, and simply say, "I can't read if you rip the pages" or whatever your child is doing. If your child is really not in the mood to read, do it again another time.

STORYTIME LANGUAGE PROJECT
FOUR-YEAR-OLDS LESSON 1

Active Reading

In active reading, children and parents share the job of reading. Although your child probably cannot read the book, your child can talk about the story and the pictures. In active reading, you will teach your child new words, new concepts and new ways of thinking and talking about stories. Your child will practice these skills by answering questions, by talking about the pictures, and by helping you tell the story. Quiet listening is NOT what we want. We want your child to be an active talker and partner in your storytelling.

Goals for Lesson 1

1.   Read together every day.

2.   Get your child talking by asking questions about the pictures or about the story.

3.   Praise your child so your child will feel proud of him/herself.

Types of Questions to Ask When You Read

Your job for the next three weeks is to ask a lot of questions as you read. What kinds of questions should you ask? It all depends on your child. Your questions should fit your child's level of knowledge or skill. Each child is different. Pick questions that are interesting and a bit challenging for your child.

1.   Naming Questions

Naming questions ask your child to name a person, animal, or object. For example: "What is this?" "Who is this here?" "Who is in this picture?" "What is her name?". Your four-year-old can name most basic things. But are there some things in the pictures that your child might not know? If you're not sure that your child knows, ask him or her to tell you what it is.

2.   Describing (Attribute) Questions

An attribute word describes a person, place, thing, or event. Attributes include: Color, size, feelings, location, actions, age, shape, use, parts. Use questions that ask your child to describe things he or she can already name.

"How many dolls does she have?"
"What does a nurse do?"

"Snoopy smells a cake. What do you think he wants to do with it?"
"What do people use a dumptruck for?"
"How does the boy feel?"

3. Why/How Questions

Ask your child to explain why things happened or how things work.

"Why is Jamaica sad?"
"Why did the brother say he put frogs in the icing?"
"How can Sam buy a present for his mom without her finding out?"
"How can Willy learn to whistle?"
"Tell me how a windmill works"

4. Future Questions

Get your child to think about the future. What is going to happen on the next page? Instead of reading ahead, stop and ask your child what he or she thinks.

"What do you think will happen next?"
"If he puts all those barrels in the wagon, what might happen?"
"Is this really going to work?"
"What's going to happen to Peter Rabbit if the farmer finds him?"

5. Comparisons

Ask your child to compare things or events in the story with things or events he or she already knows about.

"Tell me about when the same thing happened to you."
"How is a unicycle different from your bicycle?"
"How is a zebra like a horse?"
"When did you see a steamroller like this?"
"Did big kids ever pick on you like that?"
"The little boy thinks there's a monster in his closet. Did you
    ever think something like that?"
"Suzy's going to use a ladder to get the cat out of the tree.
 How else could she get the cat down?"

6. Definitions

If you come across new words in the text that your child may not know, ask your child to tell you what he or she thinks they mean. Help your child out if he or she is very wrong.

"The food was very spicy. What do you think spicy means?"
"George was a very curious monkey. Curious? What's that?"

When You Read

1.   Do your best to read every day.

The more often you read, the more your child will learn. It
helps if you have a regular time and place to read together. Let
your child pick what book or books to read. Sit in a comfortable
place where you both can see the pictures (your child sits next
to you).

2.   BEFORE you start reading, take a look at the book.

When you do this, think about the kinds of questions you could
ask of your child. Are there words in the story or things in the
picture your child does not know? 'What are good places to stop
and ask your child questions like, "What's going to happen next?"
Think about ways to make the story fun and exciting.

3.   Divide your time between reading the text and talking.

Many children like to follow a pattern in which the parent reads
the text on the page, then asks a few questions before they go on
to the next page. Don't ask so many questions that your child
gets bored; 2-3 per page is probably enough.

4.   Give a lot of praise.

Praise or confirm your child <u>each and every time</u> he or she helps
with the story or answers your question. Comments like "Right",
"Yeah", "I think so too" let your child know that he or she is
doing a great job. Your child cannot get too much praise from
you. By letting your child know that you notice his or her
efforts, you are building your child's pride and making storytime
a rewarding activity.

5.   Follow Your Child's Interests

What about the story sparks your child's interest? That's what
you should talk about. Children will attend better and learn
more quickly about the topics and ideas that appeal to them.

6.   Don't be critical.

If your child can't answer a question, give him or her time to
think. Help him or her out by suggesting an answer. If your
child says something that's not very correct, don't scold.
Again, suggest another way of looking at it.

LAST BUT NOT LEAST

7. Make it fun!!!!!!!

You want to your child to really look forward to reading with
you, so make storytime fun. How can you do this? Act out the
book. Let your child help with this. Use different voices for
the different characters. If you get to a scary part, sound
scared. If you get to a quiet part, make your voice very quiet.
If the person in the story is sad, look sad. Use gestures, sound
effects, anything to make the story come alive.

Your attitude is important. If you look forward to reading
together and if you believe it is a special time to share, your
child will feel the same way too.

Taking the time to read together is one way to show your
child that you love and care for him or her. Your child will
look forward to this time with you. You are helping your child
learn to love books and to love learning. When your child is
grown, he or she will not forget these good times.

Storytime Language Project
Parent Lesson 2

In this lesson you will learn two new teaching techniques: Open-ended Prompts and Expansion.

Specific Goals for Lesson 2

<u>Goals for Your Child</u>   <u>Teaching technique</u>

1) Think of things to tell   1) Open-ended prompts
   you about the pictures

2) Learn <u>slightly</u> more advanced   2) Expansion
   ways to describe the pictures

3) Have longer conversations   3) Repeat prompt/expand
                                        sequence

4) Learn new concepts   4) Parent adds new info

<u>Open-ended Prompts</u>

Now that you have been reading for several weeks, your child should be getting very good at answering a wide variety of naming questions and attribute questions that you ask. You have taught your child new vocabulary, and your child now understands that he or she has a lot to say about the stories. Congratulations to you both!

This week, start reducing the number of specific questions that you ask your child. Both naming and attribute questions are specific questions because they have an expected answer (e.g., What is it? A crocodile. What color is the crocodile? He's green.) Both you and your child know that you have a specific answer in mind when you ask these kinds of questions.

Now, instead of using so many naming and attribute questions, let your child make a decision as to what he or she wants to talk about. You will do this by asking open-ended prompts. Open-ended prompts cue your child to talk, but without telling your child exactly what to talk about.

Examples: Tell me about this picture.
           What's going on here?
           What can you tell me about this?
           It's your turn, tell Mom about this page.
     You tell me the story for this page.

Start each page with "Tell me about this." What will your child choose to tell you? Listen and see. If your child cannot think of anything to say, then use an attribute or naming question to get him or her started.

Expansion

Expansion is a way for you to respond to what your child says. Many studies have shown that expansion is a very important and powerful teaching technique. In expansion, you repeat what your child says, and add on a little bit more.

Examples:

Child: Ernie eating ice cream.
Mom: Ernie is eating strawberry ice cream.

Child: Dog sit.
Dad: Right! The dog is sitting.

Child: Baby crying.
Mom: The baby is hungry so she's crying.

Expansion gives your child a model of how to say something in a way that is just a little bit more complex. It makes it easy for your child to see the difference between the way he or she says a phrase, and the way you say it. Don't make your expansion too complex; just a little bit longer or different is best. Expansions also serve as a type of praise for your child's speech.

Putting the Two Together

Use open-ended prompts and expansions together. This will help you and your child have longer conversations, in which your child has to assume more responsibility for talking.

The sequence goes like this: Give an open-ended prompt, your child responds, you expand what your child said. Do this sequence about three times per picture.

Example:

Mom: Tell me about this page.
Child: Bert and Ernie in car.
Mom: Yes, Bert and Ernie are driving in the car.
        Tell me more.
Child: Going fast.
Mom: Good! They're going too fast!
        What else?
Child: Uh-oh, look out.
Mom: Look out, you guys. The policeman's gonna catch you.
Child: They got caughted.
Mom: Yeah, they are going to get caught and get a ticket.
        They shouldn't drive so fast.

End With Something New

End each page with you providing some new information to your child. Your conversational cycle for each page should go like this:

1) Start with an open-ended prompt (Tell me about this page).

2) Expand each response your child gives.

3) Continue with the prompt-expansion sequence until your child has told you most of what he or she knows about that picture.

4) Now, ask a question that your child does not know how to answer. This gives you an opportunity to teach a new word or concept, and to provide your child with new information.

Thus, these sequences are a) longer and test your child's knowledge more completely and b) always end with you teaching your child be providing new information. For example:

Mom: Tell me about this picture.
Child: There's lots of trucks.
Mom: There are lots of dumptrucks.
Child: They all working.
Mom: Right, the people are working. Tell me about their work.
Child: They have shovels.
Mom: They're digging with shovels, right. What else?
Child: Driving truck.
Mom: The man is driving a big truck!. That's a special kind.
          What kind of truck is it? (*)
          (Mom does not expect her child to know the answer)
Child: I dunno.
Mom: It's called a steamroller. It's very heavy. They use the steamroller to make the ground flat. It's so heavy, it squashes down all the bumps. (Mom gives new information to teach her child about steamrollers)

Hints

As much as possible, follow your child's interest. Notice what he or she looks at, or likes to talk about in the story. Provide your child with information about these things.

When giving new information be sure to use words and ideas that your child understands. Compare the new word or concept with concepts and experiences that are already familiar to your child. For example: "I'll tell you what that animal is. It's a zebra. It looks like a horse, but it's got stripes."

KEEP IT FUN!!!!!

Storytime Language Project
Four-Year-Olds Lesson 2

In this lesson you will learn two new teaching techniques: Open-ended Prompts and Topic Continuation.

Specific Goals for Lesson 2

Goals for Your Child

Teaching technique

1) Think of things to tell you about the pictures

1) Open-ended prompts

2) Learn more advanced ways to describe the pictures

2) Topic Continuation

3) Have longer conversations

3) Repeat # 1 and 2 in sequence

4) Learn new concepts

4) Parent adds new info or asks challanging question at end of page

Open-ended Prompts

Now that you have been reading for several weeks, your child should be getting very good at answering a wide variety of questions (naming, attribute, how, why, future, etc.) that you ask. You have taught your child new vocabulary, and your child now understands that he or she has a lot to say about the stories. Congratulations to you both!

This week, start reducing the number of specific questions that you ask your child. Many of the questions used in the first lesson are specific questions because they have a single expected answer (e.g., What is it? A crocodile. What color is the crocodile? He's green.) Naming and attribute questions are the most specific; both you and your child know that you have a certain answer in mind when you ask these kinds of questions.

Now, instead of using so many specific questions, let your child make a decision as to what he or she wants to talk about. You will do this by asking open-ended prompts. Open-ended prompts cue your child to talk, but without telling your child exactly what to talk about.

Examples: Tell me about this picture.
           What's going on here?
           What can you tell me about this?
           It's your turn, tell Mom about this page.
      You tell me the story for this page.

Start each page with "Tell me about this" or some other open-ended prompt. What will your child choose to tell you? Listen and see (do be sure to give your child some time to

respond, it may take him or her a few seconds to think of
something to say). If your child cannot think of anything to
say, use a specific question to get him or her started.

Topic Continuation

Topic continuation is a way for you to respond to what your
child says. Many studies have shown this to be a very important
and powerful teaching technique. As before, we want you to
respond in a rewarding way to each thing your child says. Now,
instead of simply praising your child, we want you to respond to
the content of your child's conversational topic. Say something
back to your child that is closely related to what your child has
just told you. One way to respond is to repeat what your child
says, but to add on a little more information, to make your
child's sentence more descriptive or more complete.

Examples:

Child: Ernie eatin' ice cream.
Mom: Ernie is eating strawberry ice cream.

Child: Fred is big, Ralph little.
Dad: You're right, Ralph is littler than Fred.

Child: The baby is crying.
Mom: The baby is crying because she is hungry.

Another way to respond is to give some new information that
complements what your child says.

Examples:

Child: Fred eats beets, Ted eats spinach.
Adult: The two friends eat different things.

Child: The fire engine is going to the fire.
Adult: Right, they need to get there before the house burns
        down.

Topic continuation gives your child a model of how to say
something in a way that is a <u>little bit</u> more complex. It makes
it easy for your child to see the difference between the way he
or she says a phrase, and the way you say it. Don't make your
response too complex; just a little bit longer or different is
best.

Because you are responding in a way that is related to what
your child wants to talk about, your child will pay close
attention, which helps improve learning. Topic continuations
also make your reading sessions more like a mature back-and-forth
conversation, and less like a question and answer drill.

Putting the Two Together

Use open-ended prompts and topic continuations together. This will help you and your child have longer conversations, in which your child has to assume more responsibility for talking.

The sequence goes like this: Give an open-ended prompt, your child describes something, you respond to what your child said. Do this sequence two or three times per picture.

End With Something New

End each page with something new. You could do this by providing some new information to your child, telling him or her something about the page or story that he or she doesn't already know. Or you could get your child to talk about something that he or she has not already mentioned by asking a challenging kind of question. Use how, why, future, comparison, or definition questions. Naming and attribute questions are too easy at this stage.

Your conversational cycle for each page should go like this:

1)   Start with an open-ended prompt (like "Tell me about this page").

2)   Respond with a short comment to what your child says.

3)   Repeat the prompt-respond sequence two or three times per until your child has told you most of what he or she knows about that picture.

4)   End the page with something new. Either give your child some information for free, or ask a somewhat challenging question for your child to answer.

Example:

Mom: Tell me about this page.
Child:Bert and Ernie are driving in the car.
Mom: Yes, they're driving the car on the highway. Tell me more.
Child:They going fast.
Mom: They're going much too fast! What else?
Child:There's a police man behind the sign. He's gonna catch them.
Mom: I think so too. The police man is going to catch Bert for speeding. They shouldn't drive so fast. They're going to get a ticket and will have to pay some money as punishment.
(Or instead of talking about a speeding ticket, the mom could ask a challanging question, like "Why is it dangerous to speed?" or "What will the police man do when Bert drives by him?")

Hints

1. Talk about what is interesting to your child.

2. If you explain something, use words that your child understands. Compare the new ideas to thinks or events that are familiar to your child.

3. It is NOT necessary to make your child repeat the story word by word. If your child knows the story and wants to tell it to you in the same way that you have read it, that is OK. But we are more interested in having the child think of his or her own things to say about the book. It is better for your child to be creative than it is for him or her to learn how to memorize a certain story.

4. When you do ask questions, be sure to use some of the more challenging ones (like how, why, future, etc.). Naming animals, colors, etc. is too simple for many 4-year-olds.

5. Don't exhaust your child. Sometimes, just read the page.

6. Your tapes are VERY IMPORTANT. Please make one tape right away, and send it to us during the first week. We will meet again in January. Please bring the last two tapes, your calendar, and the tape recorder & microphone to the January meeting.

KEEP HAVING FUN!!!!!!!