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**FROM PARENT TO CHILD:
THE EFFECTS OF A HOME LEARNING PROGRAM
ON ATTITUDES AND ACHIEVEMENTS**

**by
Linda Linstrom Baker**

**A dissertation submitted in partial fulfillment
of the requirements for the degree of**

Doctor of Education

University of San Diego

1989

Dissertation Committee

**Susan Zgliczynski, Ph. D., Director
Donna Barnes, Ph. D.
Patricia Lowry, Ph. D.**

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ABSTRACT

Literacy is shared value in our culture, yet many adults are unable or unwilling to read. Research indicates that the beginnings of literacy occur long before formal education. The purpose of this study was to determine the effects of the Preschool Reading Experience Program on the attitudes and pre-reading skills of four and five year old children. The subjects were 96 children enrolled in four San Diego preschools, and their parents. The methodology was quasi-experimental with a treatment and a control group. Interactions of sex, age, and type of preschool were also considered.

Results of the quantitative data indicated that children who participated in PREP increased their skills in the areas of letter and word recognition. Attitude measures indicated no significant effect. Results of the qualitative data indicated positive changes in attitudes as well as pre-reading skills. The interactions of sex, age and type of school were all non-significant.

An investigation of the home literary environments of the participants suggested three factors that may affect and encourage early reading: onset age of reading aloud, frequency of library use and the education level of the parents.

Parents in the treatment group expressed an eagerness to participate in their children's early reading experiences. Progress in the program, however, was consistently reported to be child and not parent directed.

DEDICATION

This dissertation is dedicated to my parents
who always encouraged me to search my life for meaning,
and to my children who helped me find it.

ACKNOWLEDGEMENTS

I am deeply grateful for the challenge and the support
I have received at the University of San Diego.

My committee chair, Dr. Susan Zgliczynski,
has been my mentor,
my role model and my friend.

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and given me more than I expected in return.
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and Dr. Patricia Lowry have shared their knowledge
and their enthusiasm for reading,
as well as their smiles and blessings.

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**FROM PARENT TO CHILD:
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**Chapter I
Statement of the Issue**

Introduction

America is facing a crisis in education. The number of functionally illiterate adults is estimated to be as high as 41% of the population (Chall, 1987). Of the 159 members of the United Nations, the U.S. ranks 49th in its level of literacy and the incidence of illiteracy is estimated to be rising by 2.3 million adults annually (Larrick, 1987). The Reading Report Card, a national assessment spanning the years 1971 to 1984 is also dismal. It shows that even among the advantaged urban subpopulation, less than 50% of children aged 17 who are still in school are able to read most newspaper stories or popular novels. Furthermore, for this population, there has been no improvement over the last 14 years (Carroll, 1987).

In an increasingly technological society, literacy becomes a requirement for normal living. Illiterate adults cannot complete a job application, pass a driver's test, file a tax return, be accepted into the military, or even read a newspaper or the warning on a poison label. With a lack of options, illiteracy becomes an invitation to welfare or crime, with consequent costs to society. The

average expense of sending a man or woman to prison for a year is more than that of going to Harvard for a year (Martin & Friedberg, 1986).

There is another deprived group in America: those who know how to read but don't read. Hay (1987) estimates that for every adult who reads, there are two that don't. Saracho calls this group "illiterate literates" (1986, p. 114). They are also known as "reluctant readers" (Thompson, 1987). Literacy elevates the individual. The written word provides information, stretches the imagination, and can be a source of personal and societal evolution. Individuals who fail to read not only close the door on further education, but on a primary source of growth and change. The impact of reading deficiency ranges from a personal lack of fulfillment on the part of the nonreader to economic and social costs on the part of society.

Education is the biggest domestic industry in the American economy (Copperman, 1979). In 1976, the national expenditure from both public and private sources for education was \$119 billion (Digest of Education Statistics, 1987). By 1986, the figure had more than doubled to \$260 billion (Education Almanac, 1988). Interestingly, the focus of spending in education has been on the older child. Traditional schooling begins at age six. From age six through age eighteen, increasing amounts of money are spent each year on the maturing student. Reading deficiency, however, does not begin at age 17 or with adult illiteracy. The inability to read begins in homes where young children see that the printed word is not valued or holds no meaning. It begins in primary classrooms where teachers are unable to communicate reading skills and interest to their students.

Formal education has not addressed the challenge of the young mind. Research studies have documented the tremendous intellectual growth potential of the preschool child. Most three year old children have considerable

ability at problem solving and can understand 1,000 words (Winter, 1985). Bloom estimated that four year old children know 4,000 words (1964). Chall's research demonstrated that most preschoolers today can discriminate and name many of the letters of the alphabet (1983).

Other studies document that children of preschool age have internalized features of writing (Hiebert, 1981; Lavine, 1972;). Goodman and Goodman determined that three year old children exhibit print awareness and that the "roots of literacy" are established in early childhood (1979, p. 1). The International Reading Association also confirmed that most children "begin the process of learning to read and write very early in their lives (1985, p. 822). Bloom stated that "as much of the development [of general intelligence] takes place in the first four years of life as in the next thirteen years" (1964, p. 88).

Since literacy begins before schooling, there is a great need to look to the home environment for the roots of the learning process. Some educators assert that success in school depends more upon what children bring to the educational process than what happens to them once they get there (Dave, 1963; Vinograd-Bausell, 1987). Hanson states, "the home produces the first, most insistent impact on the child" (1969, p. 17). The family sets the scene of the child's inner world, then filters the child's view of the outside world. "[The family] is the primary interpretive community of the child" (Taylor & Strickland, 1986, p. 31). If learning is viewed as an ongoing endeavor, then parents and the home are the only continuing influences in the process. Whether by deliberate design or circumstance, parents are the child's first teachers (Ward, 1970).

Parents have much to offer their preschool children when they become actively involved in their education. They can surround their child with an environment that stimulates language development. Through selective

attention, they can encourage reading behaviors. They can provide a role model that validates the importance of reading in today's world. They can build a strong foundation of positive attitudes and an enjoyment of learning that can last a lifetime.

Up to the present, there has been little investigation into parent directed education or home education programs at the preschool level. Teale's annotated bibliography, Early Reading, published by the International Reading Association in 1980, list only two authors, Clark and Durkin, who have completed comprehensive studies of early reading. Sampson comments in his edited work, The Pursuit of Literacy, that "most research [on beginning reading and writing] has examined literacy in school settings, with little or no attention being given to how home experiences influence literacy in schools" (1986, p. vii).

The research that has been done with young children has focused on learning outcomes, disregarding potential emotional or attitudinal results. Hanson (1969) cited the lack of research on the correlation of reading ability and reading attitudes. Saracho also wrote, "A careful examination of the literature concerning the measurement of the children's (at any age) attitudes toward reading indicates that this area of measurement has been essentially disregarded" (1986, p. 114).

In the center of this information vacuum, a fierce debate rages over the actions that concerned parents should take to best help their child. Some authors are deeply concerned that parents go too far when they assume the role of instructor. Elkind (1987) suggests that pressured preschoolers fall victim to the dark side of Erik Erickson's model of personality development. They lose trust in their parents, and suffer from guilt, alienation and helplessness. Wolf

(1987) suggests that reading instruction belongs within the school's arena, and should not begin before age six.

Other contemporary authors disagree. Beck (1986) says "teaching a preschooler to read is one of the happiest, most worthwhile and satisfying forms of early learning." Engleman, Haddox and Bruner (1983) promote the Distar program, which they recommend for ages 3.5 to 5.0. Some home preschool reading programs, such as those proposed by Doman (1964), and Smethurst (1975) have been commercially distributed and widely read.

The dialogue over beginning reading age will continue. Questions, such as, "When *should* a child be introduced to reading concepts?" are value laden and therefore insoluble. The answer most certainly differs for every child. Research can, however, do much to smooth the rippled waters of controversy. Data on the long term advantages and disadvantages of early and late reading needs to be collected, updated and expanded. Information on reading attitudes is currently minimal and critically important.

If we are to reverse the rising tide of illiteracy in our country; if we are to discover why individuals who can read elect not to read, then we need to investigate not only our school programs, but the home environments that launch children into those school programs. We need to know how reading attitudes develop in early childhood, and look for innovative and positive ways to impact those attitudes and the home environments that nurture them.

Purpose

The purpose of this study was to determine whether parents who participated in a prereading program could influence their children in the area of beginning reading skills and attitudes.

The information gained expands the knowledge base of preschool reading in many areas. Data was generated that reflected on the potential of parent-child programs. Interviews established the level of commitment these parents were willing to make, and the time they were willing to invest in a home program. Research provided data on how parents feel about instructing their children in academic areas. It offered insight to the participation level of children who were offered learning and game time with their parents in the area of prereading.

The results of the study added to the meager knowledge available on preschool reading attitudes. The data compared boys vs. girl's attitudes and four year old vs. five year old preschooler's attitudes. The study also provided comparison scores on the reading attitudes of children who attended academic preschools vs. children who attended non-academic preschools.

The reasearch uncovered information on the home literary environment of the studied population. It reflected on the type of parents who elected to participate in a home study program. It offered insight into what type of environment promoted success in home learning. It generated information on the studied population regarding the onset age of reading aloud and the amount of time parents spent reading aloud to their child.

Finally, the reasearch provided information on the PREP program itself. The effects of the program on reading skills and attitudes of the participants were quantitatively measured. The perceived benefits of the program to parents and children who elected to participate were measured through personal and telephone interviews.

Research Questions

This study investigated the outcomes of the PREP reading program on a population of children attending public and private preschools in the San Diego area. The following questions were addressed through quantitative measures.

The first research question identified whether the PREP reading program had any effect on the early reading skills of preschoolers in the experimental group compared to gains made by the control group. Skills measured were letter-sound recognition, word recognition and paragraph reading ability.

Research Question 1

Did children learn letter sounds and word attack skills as a function of their parents using the PREP home teaching program?

- H₀1 There will be no significant difference in the number of letter sounds recognized by preschoolers who have participated in PREP and comparable preschoolers who have not participated in PREP.
- H₀2 There will be no significant difference in the number of words, from the abbreviated Dolch list, recognized by preschoolers who have participated in PREP and comparable preschoolers who have not participated in PREP.
- H₀3 There will be no significant difference in the number of PREP children who are able to read from the Ekwall Reading Inventory and the number of non-PREP children who are able to read from the Ekwall Reading Inventory.

The second question explored preschoolers' attitudes toward reading. The pretest means served as a baseline for the experimental and control groups. This question addressed the issue of whether parental efforts to increase reading skills and behaviors had any effect, positive or negative, on children's attitudes.

Research Question 2

Did participation in the PREP home teaching program have any effect on the child's attitudes towards reading?

H₀₄ There will be no significant difference in the posttest score of preschoolers who have participated in PREP and comparable preschoolers who have not participated in PREP on the Preschool Reading Attitude Scale.

The third question researched differences in the initial and the gain scores of the subgroups within the population. Subgroups compared were girls vs. boys, younger (four year old children) vs. older (five year old children); and preschoolers attending public non-academic schools vs. preschoolers attending private academic schools. Were there subgroups whose skills and attitudes were significantly lower than than the study population? Were there subgroups in the population more likely to benefit from an early reading program?

Research Question 3

Were there significant differences between the scores of subgroups in the population?

- H₀5 There will be no significant difference in scores attained on the achievement and attitude measures by girls in the study population and boys in the study population.
- H₀6 There will be no significant difference in scores attained on the achievement and attitude measures by younger children in the study population and older children in the study population.
- H₀7 There will be no significant difference in scores attained on the achievement and attitude measures by children in public, non-academic preschools and children in private, academic preschools.

The Home Literacy Survey asked parents to self-report on their educational background; educational and career goals for their children; family habits, such as TV viewing and activities; and accessibility to libraries and literature. Research questions addressed whether these factors were influential in electing to participate in the early reading program. Research question five investigated whether there were home factors that influenced the level of success attained by the experimental children.

Research Question 4

Were there significant differences in the home environments of families who chose to participate in PREP and families who did not choose to participate?

- H₀8 There will be no significant difference between home environments of families who participate in PREP and families who do not participate in PREP as measured by the Home Literacy Survey (Appendix F).

Research Question 5

Were there statistically significant differences in the home environments of children who excelled in letter and word recognition skills, and the home environments of children who did not excel in letter and word recognition skills?

- H₀9 There will be no significant difference between home environments of children who excel in letter and word recognition and children who do not excel in letter and word recognition skills as measured by the Home Literacy Survey (Appendix F).

The following research questions were addressed through qualitative measures. Individual interviews with children, telephone interviews with parents, and written post-study comments were used.

Research Question 6

How do preschool children see themselves as readers?

Research Question 7

Do parents whose children participate in the program see altered reading behaviors or attitudes?

Research Question 8

How do parents feel about teaching their preschool children reading skills?

Research Question 9

How do parents feel about the PREP program?

Definition of Terms

The following terms will be referred to and used throughout the course of this research.

- Academic preschool :*** A preschool in which letter names and/or sounds are presented to the child as part of the ongoing curriculum.
- Early reader :*** "A child who develops reading skills before entering school and receiving systematic and formal teaching" (Good, 1973, p. 474).
- Formal education :*** "Conventional education given in a systematic manner" (Good, 1973, p. 248). For purposes of this study, formal education will refer to school attendance beginning with kindergarten.

- Home literary environment :*** Influences in the home on the development of language, reading and writing skills and attitudes.
- Metalinguistics :*** "Reflect[ion] upon language as an object of thought rather than simply its vehicle" (Yaden & Templeton, 1986, p. 10).
- Non-academic preschool :*** A preschool which emphasizes social growth and does not present letter names and/or sounds as part of the ongoing curriculum.
- Parent :*** The primary care-giver.
- Phonics :*** "The use of speech sounds, and letters that represent speech sounds, in the teaching of reading as a means of helping the pupil achieve independence in the recognition of words" (Good, 1973, p. 421)
- PREP :*** Preschool Reading Experience Program.
- Prereading program :*** "An organized program of activities designed to prepare a child for learning to read" (Good, 1973, p. 447).
- Preschool class :*** "A class operated for the purpose of providing early training to enhance the readiness of children for regular school instruction; usually focusing on ages three to four" (Good, 1973, p. 102).
- Reading attitudes :*** "The tendency to react specifically towards reading situations and values" (Good, 1973, p. 49).
- Reading readiness :*** "Attainment of the levels of interest, experience, maturity, and skills which enable the learner to engage successfully in a given reading task; often used to indicate the preparedness of a child for

beginning formal reading instruction" (Good, 1973, p. 472).

Reading skill : "An ability that is essential to successful performance in reading such as word recognition, comprehension, organization or remembrance" (Good, 1973, p. 537).

Implications for Leaders in the Field

This study will enable leaders in the educational field to consider the effects of parent involvement in the process of beginning reading. As documented in The Review of the Literature, the focus of research in the field of early reading has been on the school setting. In contrast, PREP is based on a volunteer effort by parents, and is conducted without school support or intervention. The level of enthusiasm, consistency and commitment evidenced by parents who participated in the study provides educational administrators information on a valuable outside resource, the parent.

Although a great deal of data has been collected on beginning reading experiences, the bulk of it has been at the kindergarten and elementary levels. This study specifically looks at a preschool population. The data from this study will benefit preschool administrators and educators, and hopefully inspire further research directed towards the young child and early reading.

Knowledge will be added to the slim body of information on preschool children's' attitudes towards reading. If half of the adults who have reading skills fail to use them (Thompson, 1987), then the acquisition of these skills is pointless. Enormous amounts of money are spent publicly and privately to teach children *how* to read. Perhaps the more important task is to teach children *why* to read. The information gained on reading attitudes at the preschool level will be a small piece of an important jigsaw puzzle that needs to be constructed.

There is a growing interest in metalinguistic awareness and the prerequisite conditions for reading and writing. In this study, parents in the experimental group intervened in their child's cognitive level of print awareness. Case studies by Krippner (1964), Lass (1982), and (Witty & Coomer, 1956), as well as interviews by Clark (1976) and Durkin (1966) have suggested that the development of literacy arises from environmental circumstances as well as the "natural" abilities of the child. Parents participating in the experimental group of the study altered the literary environment of their child. The collected data will be a reflection on this intervention, and therefore of value to theorists and those formulating paradigms for the acquisition of literacy.

Finally, the results of the study will be used to suggest the potential effectiveness of home programs, and to help educators estimate the proportion of families who are likely to avail themselves of such programs. The data will confirm the effectiveness of PREP in relationship to the studied population and the time constraints of the research.

Limitations and Assumptions

There are two components to the PREP program. The first is the technical component which uses games and reading aloud to interest the child in reading and to teach beginning phonics. The second, the psychological component, is the interaction between the parent-child dyad. One limitation is that any measured effect may be the result of the parent-child interaction, or may be the result of the PREP approach. Further studies with other prereading methods could clarify this issue.

The second limitation is that of generalizability. The experimental group is, of necessity, a volunteer group who have shown a commitment to reading

education through their participation in the study. Therefore, the results cannot be generalized to a population that would not elect to participate in such a program. This factor, however, can also be seen as a positive consideration of the study. If the volunteer status is considered as an artifact-independent variable, it may provide useful data on what types of parents and children are willing to participate in and benefit from home-based learning programs (Rosenthal & Rosnow, 1975).

The third limitation is the threat of researcher bias. The researcher wrote PREP in 1982 , and she conducted the parent seminars . The quantitative data and the children's interviews were collected by the researcher and two trained assistants. To minimize bias, the researcher and assistants were unaware of which children were in the control and experimental groups. The telephone interviews were conducted by the researcher. Data on the home literacy environment was written by the parents and returned to the researcher by mail.

The researcher made the following assumptions:

1. Data provided by the parents in response to interview questions and the Home Literacy Survey was accurate.
2. Preschoolers responded to the best of their ability in response to questions of reading achievement.
3. Responses provided by preschoolers to the attitude interview questions reflected their true feelings.

The study is delimited to the study sample and the population from which it was drawn. The subjects were from four preschools in the San Diego area. The subjects lived in an urban area, with a middle to upper class socio-economic range. The subjects were mostly Caucasians.

Chapter II

Review of the Literature

Introduction

Rationale

The topic of reading readiness and attitudes of preschool children toward reading has not been widely researched. Since formal education begins with five year olds, educators have directed their energies and funds into research on kindergarten and school aged children. For this reason, the scope of the literature review covers the limited research on reading in the preschool years and extends into the studies done on reading in the elementary grades.

This review reflects pertinent literature from 1980 to 1988. A computer search of ERIC documents, as well as journal articles, newspaper articles and books were explored and evaluated. The references prior to 1980 come from bibliographies and appendices cited in later documents.

Extent of the Review

This review covers material from 1980-1988 with significant references that precede these years. The focus of the review is as follows:

1. *Pre-cursors of formal reading on literacy development.* At whatever age a child begins to read, that child already carries a knowledge of spoken words, print, and stories. This knowledge includes oral language, print

awareness, concepts about print and interest and experience in writing. Children also have an awareness of language constructs, or metalinguistics. This area of the review covers studies on children's awakening literacy.

2. *The maturation level of reading children.* Children who are reading prior to formal education are not the norm. Numerous studies are discussed which relate information on these children who read prior to entering kindergarten.
3. *Studies on the continued academic achievement of early reading children.* Studies which have followed the progress of early readers are examined to explore the positive and negative effects of early reading.
4. *Children's attitudes towards reading.* Since very little has been done in the preschool time frame, this portion of the review includes results of attitude measures at all levels of school age reading.
5. *The influence and success of parents as teachers.* Studies that deal with parent education programs outside of the school setting are cited. Information on alternative home education programs is not within the scope of this review.
6. *The influence of the child's home environment.* Beginning in the 1960s, researchers began to examine the relationship between the home and the child's academic success (Dave, 1963). This part of the review focuses on studies correlating socio-economic factors, parent education levels, and the home literary environment to reading achievement and attitudes.

Findings

Awakening Literacy

Bruner (1978) suggested that any explanation of oral language learning that begins when children say their first word begins too late. Certainly, reading requires more than giving a letter sound, or recognizing a word in print. Reading is a composite of many literary antecedents in a child's life. Since every child brings their own background to the reading process, it is difficult to see reading as a lock-step developmental process.

Ferreiro concluded that children take a circuitous rather than a linear path into literacy. Their struggle with learning to read and write is one of reconciling conflicts. One of the conflicts is between drawing and writing. In their pictures, young children often include letters as part of the drawing that are vocalized by the created figure. Another conflict concerns the amount of written text. Text in books is often seen by the child as naming the picture, rather than containing information. This brings about a contradiction between the brevity of the name and the amount of print on the page. In Ferrerio's view, children progress by experiencing conflicts within their current level of comprehension and reconciling the contradictory evidence by rewriting their patterns of understanding (1986).

Therefore, patterns of language usage are interrelated. Listening, speaking, reading and writing abilities as aspects of oral and written language develop concurrently and interrelatedly, rather than sequentially (Teale and Sulzby, 1986).

Oral language. Infants necessarily understand the speech around them long before they produce speech themselves. Bloom stated that children at age four use over 4,000 words (1981). Miller computed that infants learn a new word every hour that they are awake (1977). Before they attend school, children

acquire "a vibrant oral language and a strong sense of the syntactic and semantic structure of the language, and a rich oral tradition of stories and rhymes" (Sampson, Briggs & Sampson, p. 97, 1986).

Smith called this informal process of language acquisition the *Can I have another doughnut ?* theory of language learning. Children learn to ask for a doughnut not to practice or acquire language, but to get a doughnut. He argued that language is therefore both individual and social; individual because it requires effort and creativity from the child, and social because literate members of society demonstrate the language and include the child in their language using community (1984).

Oral language, that begins with birth, opens the child's world to reading and writing. Spoken words are the social vehicle that allow the child to learn how language works and to make meaning from the language.

Print awareness. Studies indicate that children have an early awareness of print. Hiebert tested three and four year old children on the recognition of words that frequently occur in the environment, such as McDonald's, STOP and M&Ms. Although the four-year-old children had a higher proportion of correct responses than the three-year-olds, the groups did not differ significantly on the types of errors they made. Hiebert concluded that age differences were quantitative rather than qualitative, and that young children are acquiring knowledge of written language as they acquire their spoken language (1978).

These findings were supported by McGee, Lomax and Head (1988). McGee et al. studied 81 three to six year old children to explore their awareness of environmental and functional print. Their results demonstrated that three and four year old children who had not begun to read attempted to read print items with which they were familiar. The children's sensitivity to environmental print was highly organized and similar to older, more experienced readers.

Goodman (1986) reviewed five studies on early print awareness. He found that 60% of the three year olds studied, and 80% of four year olds studied, could read environmental print embedded in context. Goodman concluded that "children learn between the ages of 3 and 5 that print carries the message" (p. 9).

Case studies also document early print awareness. Doake (1986) began reading Arabic and English books to his son Raja on the day he was born. He continued daily reading aloud based on his son's interest span. Doake noted that at two months Raja first began to look at the pages as they were read. At four months, Raja showed a preference for familiar stories and restlessness and distraction when new books were introduced. By 10 months, Raja demonstrated that he distinguished between books written in English and books written in Arabic by the way in which he turned the pages. One of Doake's conclusions was that parents are responsible for providing a print oriented environment.

Early writing experience. Teale (1987) suggested that the young child's reading and writing abilities mutually reinforce each other. In a study of 24 low income Anglo, Black, and Mexican American children in San Diego, California, he found evidence of early literacy. Even though the children were from culturally different homes, Teale observed that they experienced literacy directly through reading or writing over 2,000 times and for almost 500 hours in the course of a year. He concluded that regardless of cultural background, virtually all children have numerous experiences with written language before schooling.

Harste, Woodward and Burke see "language learning as first and foremost a social event" (p. 90). They support their view with examples from different cultures. They give early writing examples from three children who are

three years of age. The first child, Dawn, is American, and her scribbles look English; Najeeba is Saudi Arabian, and her scribbles resemble Arabic. Offer is an Israeli, and her scribbles look very Hebrew. Harste et. al. concluded that young children make sense of the world of print long before formal instruction.

Bissex (1980) noted in her case study of her son Paul that reading and writing develop together. At age five, Paul sounded out spellings in order to write messages, and his own messages served as practice sheets for his reading. Bissex concluded that this cross pollenization of reading and writing indicated a metalinguistic awareness in children.

Metalinguistics. There is a current paradigm that the ability to read and write is dependent upon the child's awareness of the *language* of language; the ability to see language as an artifact (Teale & Sulzby, 1986; Taylor, 1986). This perspective has been demonstrated by numerous studies of oral language, as well as studies of early print awareness and written language.

Olson (1984) saw literacy as the conceptualization and representation of language as an object. He believed that children learn the language of language concurrently with their speech patterns. In studies of home environments, he concluded that literate parents teach an orientation to language in the process of teaching them to talk.

Current evidence is available on early recognition of sounds (phonemic awareness). Maclean, Bryant and Bradley (1987) studied 66 children, average age 3.3 years, to explore their knowledge of nursery rhymes. They found that children as young as three were able to analyze sounds in words as demonstrated by their recognition of alliteration and rhyme. Chall (1983) and Perfetti (1987) however suggest that the ability to hear distinct sounds in words develops as a result of beginning reading. Perfetti studied phonemic synthesis

and analysis and concluded that "phonemic knowledge and learning to read develop in mutual support" (p. 317).

Children also have an early awareness of the significance of print. Goodman (1984) reported that children as young as three use the word *say* as a synonym for *read*. He concluded that this usage indicates that children conceptualize print as expressing meaning (Goodman, 1984).

In their writing, young children demonstrate an awareness of the symbolic nature of script. Ferreiro (1984) documented in case studies that children initially refer to letters as objects themselves, then progress to the realization of the relationship in which groups of letters are actually symbols for names of objects.

Children are awakening to literacy with their first verbal encounters. The impetus for acquiring language is both individual and social. Although this study and the remainder of the review is devoted to children who are already reading, it is important to acknowledge that the seeds of reading have been planted long before reading behaviors occur.

Preschoolers Who Read

Educators know that children in our literate society begin to read long before they confront formal schooling. There are abundant examples of written materials that surround them: highway signs, books and newspapers, words flashed on educational television, and names everywhere: names of companies, names of fast-food restaurants, names of products, movies, TV shows, even names of entertainers and politicians. In fact, it is estimated that the average child entering school can understand and use 4,000 or more words (Bettelheim & Zelan, 1982). The International Reading Association

suggested that the process of learning to read and write begins during the first year of life (IRA, 1986).

Lass, writing a case study of Jedd from birth to age two, observed 14 recurring reading behaviors. These ranged from scanning print from left to right at the age of 2 1/2 months to matching uppercase and lowercase letters at 21 months. Lass concluded that given a facilitative environment, certain reading behaviors appeared very early in life. These behaviors included, "acquisition of letter and number names, an interest in the messages of print, a beginning sight vocabulary, and delighting in the pleasures of literature" (1982, p. 27).

Jedd's parents purposefully enriched his literary environment. A case study by Torrey (1969) of a young black child, John, offers another view. John came from a disadvantaged home where he received little encouragement. He reportedly "had been able to read almost from the time he could talk" (p. 551). Evidence suggests that he learned to read solely from memorizing and reciting, then reading television commercials. At age six, his IQ, measured on the Wechsler Pre-Primary Scale of Intelligence was 104. The study concluded that early reading is not necessarily a function of high verbal ability or cultural privilege.

Broad studies to determine the scope of early reading in this country are not plentiful, but suggest that some children do read before entering school reading programs. Dolores Durkin conducted two longitudinal studies, one in Oakland (Durkin, 1961) and the other in New York (Durkin, 1966). In Oakland, she identified 49 of 5,103 children (1%) as reading before schooling. In New York, 157 of 4,465 children (3.5%) were identified as early readers. In both studies, early readers were selected based upon the results of an individually administered word identification test. Another New York study, the CRAFT

Project, used word lists to identify 58 of 1,378 children (4.2%) as early readers (Morrison, Harris & Auerbach, 1969).

Perhaps the most interesting feature of these studies was the variation in the children themselves. The CRAFT Project was composed entirely of black, middle-city children. Durkin's Oakland study drew from families in the lower economic level, in which the early readers had a median IQ of 121 and an IQ range of 91 to 161 as measured on Stanford-Binet IQ tests. The New York children, however, were from "predominantly middle and upper SES Jewish homes" with a median IQ of 132 on the Stanford-Binet (Durkin, 1966). Clark's study of 32 fluent readers in Ireland, revealed a median IQ of 122 as measured on the Wechsler Pre-School and Primary Scale of Intelligence (1976).

Some studies have been limited to the gifted population. Price (1976) studied 37 gifted children in Florida who had IQs ranging from 125 to 155 on the individual Stanford Binet or the Wechsler Intelligence Scale for Children. She found that 38% of these children were reading sight words at age four. Cassidy and Vukelich (1980) researched the numbers of gifted children that read before schooling. Using the Slosson Intelligence Test, they noted that a relatively small percentage of the gifted preschool population (17-23%) actually start to read before entering kindergarten, though this percentage is much higher than the 1% to 4.2% noted in earlier studies.

Studies on early readers suggest that they tend to have higher mean IQ scores than non-readers. However, these findings, also confirm that early reading ability is not *solely* dependent upon a high IQ or a significantly higher economic background.

Academic Effects of Early Reading

There exists some uncertainty about the effects of preschool experiences in general and preschool reading in particular. Project Head Start began in the 1960s based on the belief that low income children would benefit from preschool programs. A 1969 evaluation of the program appeared to indicate that the advantages of preschool education dissipated several years after the child left the program. These findings were given much publicity, and the negative inferences have remained. A reanalysis of the data in the late 1970s, however, yielded significant positive results which ultimately led to the expansion of the program (Husan & Postlethwaite, 1985).

A follow-up evaluation of Project Head Start conducted by the Consortium for Longitudinal Studies (Beller, 1983) also demonstrated the long term benefits of preschool education. The Consortium located 79% of the original 1960s Head Start subjects. They documented the following conclusions from information on these students.

1. Fewer Head Start students were in special education classes compared to control group students.
2. More were promoted with their classes.
3. More graduated from high schools.
4. Head Start students had higher occupational expectations than control group students.

The Perry Preschool Project followed 130 economically disadvantaged children from their preschool experience through age 15. Results, as illustrated in Table 1, clearly show that the group who had attended preschool remained ahead of the control population throughout their school careers (Schweinhart & Weikart, 1980).

Table 1

Perry Preschool Project Analysis

Measures	Preschool Attendees	Control Group
High School Graduates	67%	47%
Employed at Age 18	58%	32%
Welfare Recipients	17%	37%

Note. The data in columns 2 and 3 are from Schweinhart & Weikart, 1980.

Results from these two major studies, Head Start and the Perry Preschool Project indicated that disadvantaged children significantly benefit from preschool programs.

In a five year study by Creech (1982) the positive relationship between preschool experience and reading achievement is documented. Creech compared yearly the reading scores of children who had preschool experience with children who had not attended preschool. He found no differences at the first grade level, but increasingly significant differences in favor of the preschool group in subsequent years. At the fourth and fifth grades, the difference in reading achievement between the groups was significant at the .001 level.

A number of studies suggested that there were significant benefits to children who read before formal education. Cassidy and Vukelich (1980) found that early readers progress more rapidly than non-readers in language development. They offered a summer program one year and a semester program the following year to provide language experience activities to early readers and nonreaders of equal intelligence. At the conclusion of both studies, they found that the greatest gains in the program were made by children who

were already reading. The nonreaders did not make significant gains in the program.

Collins (1986) noted that early readers have a more positive attitude towards language experiences. He studied children ages four to six who were reading two years above their grade level. These children were more likely to be interested in writing and had a stronger desire to read.

Researchers in the CRAFT Project found a correlation between early reading and continued reading achievement. The project was designed as a comparative study of methods of teaching beginning reading. It included over 1300 children from 12 minority schools in New York. Using word identification, the researchers labeled 58 (4%) of the children as early readers. These children were followed for three years and compared on reading achievement tests with children who demonstrated equal ability on a speed-of-learning test given in the first grade. Early readers achieved higher scores on all reading subtests through the three years. The margin of reading proficiency for the early readers also increased each year. The researchers therefore concluded that "early readers enter school with a highly significant advantage in reading readiness and in reading ability that they maintained over a three-year period" (Morrison et al., 1969, p. 17).

Delores Durkin is known for her seminal work, Children Who Read Early (1966), which describes the results and implications of two longitudinal reading studies conducted by Durkin in Oakland and New York. In these studies, Durkin defined *early readers* as children who had not received instruction in reading, but could identify at least 18 words from a list of 37, and read with a raw score of *one* on a standardized reading test. From 1958-1964 in Oakland, Durkin followed 49 pre-kindergarten readers through sixth grade and found that "the

average achievement of readers was significantly higher than the average achievement of equally bright classmates who were not early readers" (p. 41).

In a second study in New York, Durkin (1966) followed 30 early readers through third grade. Again, early readers had significantly higher reading achievement than non-early readers of the same mental age. The comparative gains were greatest among children with an average I.Q. Durkin concluded that early reading has benefits in reading achievement, especially for children of lower I.Q.

Durkin's conclusions can be seen in another light. The early readers in Durkin's studies came from homes that environmentally promoted reading prior to schooling. These homes most likely enriched their children's educational experiences as well. The conclusion could be drawn that a supportive home environment, not early reading skills, led to the superior achievement of the early reading children.

On a dissenting note, Feitelson, Tehori and Levinberg-Green (1982) objected to early reading instruction based on their research of Israeli children. In three experimental studies, they demonstrated that older children, six and seven years of age, tested significantly higher in learning decoding and comprehension skills than younger children, four and five years of age, who participated in the same program. They expressed the view that since older children learn more rapidly, reading instruction should be delayed until six or seven years of age.

Overall, the results of these studies suggest long range benefits resulting from education prior to formal schooling. They also indicate that early readers maintain the achievement advantage they hold when entering school.

Reading and Reading Attitudes

"A child's attitude toward reading is of such importance that, more often than not, it determines his scholastic fate" (Bettelheim, 1982). It is one thing to teach a child to read and quite another for the child to learn to love reading. Attitudes determine whether reading will become merely a skill or a life-long habit. It is critical that children learn to see books as both sources of information and enjoyment. Saracho described people who know how to read but do not read as "illiterate literates" (1986, p. 114). Researchers have, to some degree, examined the relationship of reading attitudes and reading ability. Ransbury (1973) found that children who liked reading were good readers and that negative reading attitudes correlated with poor reading skills.

In a survey of primary teachers, Heilman (1972) noted that "aversion to reading" was listed as the most frequent difficulty among retarded readers. He believes that since reading failure leads to reading aversion, attitudes acquired by children early in reading strongly influence their later reading interests and abilities.

In a study of four-year-old children, Thomas (1984) found that early readers had different attitudes towards play. He compared 28 children who scored at the second grade level or above on the Complete Woodcock Reading Mastery Tests to 28 non-readers of similar intellectual and socio-economic background. Early readers spent significantly more time with reading readiness toys, while nonreaders preferred manipulative and gross motor toys from the ages one to four. Nonreaders also showed a greater interest in fantasy toys at age four. Thomas concluded that toy selection may be indicative of or actually influence early reading attitudes and skills.

In the CRAFT Project which followed New York early readers for three years, Morrison et al. found that three of four groups of early readers increased

their liking for reading over the course of the study. They concluded that "early readers were more eager to read than a control population" (1969, p. 19) The conclusions, however, were dependent on the type of reading instruction received in the school program.

It seems likely that early readers receive positive feedback for their skills and interest. The case study of Jedd suggests that such a halo effect occurred. Jedd experienced enthusiasm from the praise he received when he exhibited reading behaviors, which led to more frequent reading behaviors (Lass, 1982) .

A review of available testing materials (Mitchell, 1983; Sweetland & Keyser, 1986) and the sparse available literature on attitudes indicates that the measurement of reading attitudes is a subject that has been essentially ignored.

Parental Influence on Reading Skills

Educators have long been aware of the relationship between children's home backgrounds and success in school. One view of public education was that the public schools replace the home tutor in order to provide an even and equal education to all. Given this perspective, public schooling was not designed to complement home instruction, it was designed to replace it (Smethurst, 1975). Possibly for this reason, American public education has not generally included parent instruction.

Nebor (1986) reviewed the research on the effect of parental influence and involvement and found that reading achievement correlates with parental attitudes towards education (role modeling). His review also concluded that direct parental involvement in the form of tutoring can significantly increase a child's reading skills.

Information from fifteen studies in which parent instruction was used and achievement results were measured was collected for this review. The data from the studies is summarized in Table 2.

The programs studied varied widely on many factors, including the following.

1. *Age and reading level of the child.* The children ranged from preschool to the 6th grade. In half of the studies, the children were at risk because of established low performance or disadvantaged homes.
2. *Length of program duration.* The studies ranged from a short time span of two weeks (Bausell, Bausell & Bausell, 1980) to longitudinal studies that measured achievement over four years. Burks (1986) found that children receiving parent instruction initially showed no gains. However, over a period of four years, the treatment group surpassed the control group who had not received parent intervention.
3. *Amount of school involvement.* The models had varying degrees of supervision and instruction. Two models used TV instruction for parents (Brzeinski, 1964;McManus, 1964). Four models used materials only (Niedermeyer, 1970; Schuck, et al., 1983; Sullivan & Labeaune, 1970; Vinograd-Bausell et al., 1980). Six of the models involved orientation sessions for the parents and materials developed by the schools for parental use (Burks, 1986; Izzo, 1976; Keele, 1971; McCormick, 1984; O'Neil, 1975; Swoyer, 1985). Three models resulted from direct observation of the parent and child working together (Dolan, 1980; Izzo, 1976; Wise, 1972).

Table 2

Outline of Studies Using Parent Intervention

Year	Author	Sample Size	Grade Level	Measure	Results
1964	Brzeinski	4,000	PrS	The effect of parent tutoring on reading readiness skills	E > C
1964	McManus	200	PrS	Using TV, how could parents prepare their children for reading	E > C
1970	Nieder-Meyer	48	K	Parent tutoring in word recognition & consonant sounds	E > C
1970	Sullivan, Lebeaune	60	1	Effects of a parent administered summer reading program	E > C
1971	Keele	60	K-1	Effects of parents & high school tutors on young readers	E > C
1972	Wise	38	K-6	Effects of a parent reading clinic for low income, and ed. handicapped children	E > C
1975	O'Neil	159	1-3	The effect of parent tutoring of reading disabled students	E > C
1976	Izzo	64	3	Effects of home instruction on under achieving readers	E = C

Notes. E = Experimental (treatment) group.
C = Control group. PrS = preschool.

Table 2 (contd.)

Outline of Studies Using Parent Intervention

Year	Author	Sample Size	Grade Level	Measure	Results
1980	Dolan	346	1-6	Correlation of home support and school achievement	E > C
1983	Schuck, Ulsh & Platt	150	3-5	Parent tutoring using a rewards calendar	E > C
1984	McCormick	120	PrS	Effects of pre-K parents using easy books	E > C
1985	Swoyer	30	PrS	Effects of low income parent participation in language dvmt	E > C
1986	Burks	30	1-4	Effects of parent student interaction correlated with school instruction	E > C
1987	Vinograd-Bausell	195	1	Effect of parent teaching word recognition skills at home	E > C
1987	Lazarri	38	PrS	Effect of parents reading aloud on language development	E > C

Notes. E = Experimental (treatment) group.
C = Control group. PrS = preschool.

4. *Variables measured.* All of the studies measured some aspect of reading achievement, including reading comprehension, letter names and sounds, context clues, decoding, and word recognition.

Despite the wide variation in the studies, the overall results demonstrated that parents can and do make a positive difference on measures of reading achievement. As indicated in Table 2, fourteen of the fifteen studies documented statistically significant differences favoring children instructed by their parents in comparison to noninstructed comparison groups on at least one reading achievement dependent variable.

Only three of the listed studies related specifically to parents and early reading. The first was an outgrowth of the Denver Reading Project (Brzeinski,1964). In this study, three groups of pre-kindergarten parents were established to provide reading readiness skills at home. In the first, parents were told to continue their normal print related activities; in the second, parents were provided instructions using a guidebook and programs presented on educational television; in the third, parents received guidance from experienced teachers and small parent-discussion groups while using the guidebook. A comparison of the children's gain scores using the Stanford Binet Test of Skills Basic to Beginning Reading indicated that "the amount a child learned was related directly to the amount of time someone practiced the beginning reading activities with him" (p. 20). Reading aloud was also found to have a significant effect, whether or not the child was introduced to reading activities.

The second study involved 200 parents in New Hampshire. The treatment group consisted of parents who had volunteered to help their preschool children with prereading skills by implementing instructions provided weekly on educational television. The control group lived outside of the reception area and offered no special instruction to their children. After four

months, the children in the treatment group demonstrated "considerable gains in letter-name and letter-sound knowledge, in simple alphabet and phonic ability, in sight-word recognition, and in ability to identify words by using the beginning sound and context. The measurements used were the McKee-Harrison Test of Skills Basic to Beginning Reading, Forms A and B. Although the researchers attributed the gains solely to the television instruction, the study indicates that parents in the treatment group attended two meetings featuring guest lecturers and received a reading list. Certainly, participation in the program heightened parents awareness of the importance of reading, and the recommended reading list may have promoted reading aloud.

The third study is the intervention strategy pursued by McCormick in 1984. McCormick demonstrated and distributed three simple illustrated stories to a randomly selected treatment group of parents in the spring before their child's kindergarten enrollment. The parents received a second packet in the summer, and a third packet in the fall. The following year, randomly selected parents received only the initial set of books. At the end of kindergarten, children whose parents had received books were compared with children who had not received books using the Peabody Picture Vocabulary Test. The treatment groups for both years scored significantly higher on story reading and letter name knowledge. On all other measures, the groups were equivalent. McCormick's study demonstrated the potential of parent involvement, even at a very low level.

There have been criticisms of parent involvement in reading efforts. Hymes (1963) condemned proposals to teach young children to read on the basis that early reading approaches fail to consider the individuality of the child. Hiebert (1986) suggested that some school programs that encourage parent involvement may require more of parents than is appropriate for their education

levels. She also felt that many parents are encouraged to teach reading skills while ignoring or postponing a naturalistic approach.

Elkind (1987) also disagreed with parent intervention in the reading process. He expressed concerns that children who succeed in early reading will become disliked by their peers, or that children who fail to learn will lose self-confidence, initiative and parental trust. Support for Elkind's view is expressed by Werner and Strother (1987). These authors saw parents as critical in the learning process and stressed the importance of parental encouragement over parental pressure.

The Department of Education and Science in England funded a three year study on parental involvement in schools, which began in 1986. The first year findings included the results of a questionnaire distributed to 84 schools in England and Wales. Administrators ranked the advantages and disadvantages of parent involvement in elementary education. Although the greatest benefit listed was the understanding that parents would gain about the schools themselves, the second primary benefit was the academic attainments expected from the children whose parents were involved. The obstacles seen to parent involvement were school rather than child or parent-related (Jowett & Baginsky, 1988).

Much of the controversy on parent involvement seemed to be directed at the quality of the program used, the instructional techniques followed, or the program's applicability to the school curriculum. Heath (1984) conducted a case study that speaks to this issue. Heath studied the success of a black single parent, Charlene, who had dropped out of school in tenth grade in order to raise her two year old son and newborn infant. Heath supplied the girl with books to read aloud to her son for ten minutes each day, and a tape recorder to record the session, and the child's play time immediately following the session.

The girl was barely literate herself; her reading skills were poor, her verbal and grammatical skills minimal. But the program was a great success. As a result of the program, both parent and child advanced in literacy. The reading established a pattern of verbal interaction that was more child than adult oriented. Charlene described her son as "wise" and spoke of him going to school (p. 70). The child became more self confident and a participant in family discussions.

The success of this program and the many others reviewed suggests that the controversy over parent involvement in learning to read is misdirected. The content of the program is less important than the context. Parent programs are successful. This success appears to be based more on the interaction between the parent and child than on the form or methodology of the instruction itself. When parents focus on aspects of literacy and increase the positive time they share with their child and books, achievement will follow.

Reading and the Home Literary Environment.

In the early 1960s, Bloom opened a Pandora's box on the importance of the home environment in childhood education. He maintained that half of the intellectual differences at age 17 are predictable by age four (Bloom, 1964). Other authors have agreed with his conclusion that "the more powerful determinants of success in school lie in what children bring to the schooling process rather than what happens to them once they get there" (Vinograd-Bausell, 1987, p. 57).

In 1985, Dzama and Gilstrap conducted a study of children attending preschools in Virginia to examine what parents do to prepare their children for a formal reading program. In essence, they wanted to establish the parameters of a positive home literary environment. Surveys completed by 157 parents

indicated that 89% read aloud to their children on request at bedtime, usually on a daily basis. Books were considered important in the home. The majority of children's books were received as gifts with 52% of parents purchasing books and 45% of parents using the library. Prereading activities included reading signs (34%), phonics games (24%), writing the alphabet (16%), and workbooks (11%). In a New Zealand survey, Nicholson (1980) found that 97% of the parents responding felt that they could help their children with reading. Although not conclusive, these surveys did indicate a willingness of parents to participate in the reading experience.

Rankin (1967) identified four behaviors that are related to the development of children's interest in reading:

1. Mothers had children read aloud
2. Mothers asked children to tell about stories
3. Mothers read to themselves
4. Parents read magazines.

An interesting aspect of Rankin's findings was that three of the four behaviors are directly related to the mother-child relationship and not the father-child relationship.

In a similar study, Hanson (1969) investigated the influence of the home literary environment on children's independent reading attitudes. Using 48 fourth grade students in Wisconsin, he correlated reading attitude as measured by questionnaires, books read from the library, and personal interviews with the (1) the literary environment, (2) child's IQ, (3) father's occupation and educational level and (4) child's position in the family. He concluded that the "home literary environment revealed the only significant contribution to independent reading" (p. 22). In correlating reading achievement with the

above factors, he found that IQ and the home literary environment were the only statistically significant factors.

In 1980, Dolan researched home concern and support and quality of school instruction as correlates of academic achievement. The results suggested that both the home environment and the academic program were strong determinants of standardized achievement. Based on these results, Dolan concluded that a reconception of the home environment was warranted. These findings concur with the results of the early reader studies in Oakland and New York. In interviews following the New York study, Durkin correlated early reading ability with home reading experiences more than with the static background variables of IQ and SES (Durkin, 1961, 1966). Bloom (1986) argued that only 10% of the variation in school achievement is attributable to SES. He concurred with Dave (1963) and Dolan (1980) that fully 60-70% of school achievement could be influenced by home environmental processes. "The home that fosters an interest in reading does so by creating an environment that places a high priority on the printed word" (Fitzpatrick, 1982, p. 50).

Conclusions

The literature on metalinguistics, oral language, print awareness, and early writing suggested that children are awakening to literacy with their first verbal encounters. Experiences of listening, speaking, reading and writing develop concurrently and mutually reinforce each other. The importance of literacy is therefore more than just the ability to read and write, it is the inclusion of the child in the literary culture of our society.

This review covers the available literature on early reading achievement. Major studies, as well as intimate case studies on young children, suggest that

children from a wide range of academic and social backgrounds are capable of reading prior to formal education. Longitudinal studies have shown that precocious readers enjoy lasting benefits in reading achievement, in attitudes towards language experiences and attitudes towards reading.

Studies that investigated parental influence on reading were discussed. These studies indicate that parents can make a positive difference in reading achievement. The home environment is also shown to be a strong predictor of reading aptitude.

The literature review suggests that a great deal of further research needs to be done in all areas of early reading. Very little information has been collected on skills-oriented parent-child programs. Even less data is available on reading attitudes at any level. Some authors have serious objections to parent involvement in the reading process, and there is not a body of data to confirm or refute their concerns.

Much of the literature on early reading is dated. Sesame Street, working mothers and the home computer have been introduced in the 20 years since Durkin researched Oakland and New York. Quantitative studies are needed to measure the number of children who currently read prior to formal schooling. Longitudinal studies which extend beyond three or four years are needed to further document the effects of early reading.

There is very little research on reading attitudes at any level. Qualitative research would be of great help in exploring both the attitudes of early readers and nonreaders and the attitudes of their parents. Much of the available evidence on early reading is retrospective. Research is needed on children who are in the process of learning to read before formal education in order to better serve readers of the future.

Chapter III

Research Design and Methodology

The purpose of this study was to determine whether parents who participated in a prereading program influenced their children in the area of beginning reading skills and attitudes. The research design was quasi-experimental, including one treatment group who participated in PREP and a control group who did not participate. Assessments included pre- and posttesting on reading skills and attitudes. Interviews with children and parents provided cross validation of the quantitative measures

Overview of the Research

The researcher initiated the following activities in order to answer the research questions.

1. The PREP program was offered to parents in the target population during the winters of 1988 and 1989. Parents were informed of the program through flyers that their children brought home from school or through parent meetings held at the school sites.
2. The treatment group was composed of children whose parents enrolled in the early reading program, and attended the parent seminars. The control group was composed of children whose parents did not attend the seminars. At two of the preschools the control group included the remainder of the children. At the other two preschools, parents elected to participate in the control group.

3. All children in the target population were pretested using attitude and achievement measures. Children were individually interviewed on their feelings about reading and tested on achievement and attitude measures in their school settings.
4. The researcher presented the PREP seminar to 46 parents who had volunteered to participate in the study. Except for two fathers and one grandmother who attended the seminars, the participating parents were mothers. Program materials, games and plans, were distributed to these parents during the three hour seminar. A total of nine seminars were held at the various school sites, with three to six parents in each seminar.
5. After 12 weeks, the entire target population was posttested using attitude and achievement measures. Children were tested individually in the school settings.
6. Participating parents were sent the Home Literacy Survey. In the experimental group, these surveys were distributed at the parent seminars. For the control group, these surveys were sent home with children, or mailed.
7. Half of the parents who participated in the treatment group were randomly selected and interviewed. Random stratified selection was used for the telephone interviews.
8. The researcher compared scores on the achievement and attitude measures using the variables of treatment, sex, age, and type of preschool.
9. The researcher compared subgroups on information provided by the Home Literacy Survey and evaluated information gained on the qualitative measures.

Rationale for the Research Design.

The research design included both quantitative and qualitative methodologies. The quantitative data was used to measure the program outcomes, and the qualitative data measured the processes used in the program (Hollister, 1979). In addition to offering breadth to the methodology, this approach provided cross validation in analyzing the results of the study (Miles & Huberman, 1984).

The quantitative portion of the methodology was based on the pretest, posttest nonequivalent control-group design. This design is one of the most widely used quasi-experimental designs in educational research (Borg & Gall, 1983; Cook & Campbell, 1979). The treatment and control groups were nonequivalent due to the necessary voluntary commitment of the parents participating in PREP. The two groups were balanced by age, sex and type of preschool. The pre- and posttests addressed early reading skills and preschool attitudes towards reading.

Table 3

Research Design

Groups	N	Pretest	Treatment	Posttest
Experimental	45	X	PREP	X
Control	51	X		X

The qualitative research design assessed attitudes and observed behaviors. Interviews with parents who participated in the treatment group were used for data collection.

The Preschool Reading Experience Program (PREP)

PREP was designed for parents who wanted to spend positive time with their children in a reading environment and help their ready-to-read preschoolers gain reading skills. The parent attended a three hour seminar which introduced him/her to the program philosophy and materials. There were two primary messages delivered in the seminar. The first was that reading is a fun, shared activity. The second was that parents can make a difference in their children's reading skills and attitudes by encouraging them when they show interest in reading. The seminar provided the following materials:

1. Daily activity suggestions.
2. 30 phonics oriented games to be played by parent and child.
3. 5 short books.
4. A suggested read-aloud component.

The parent-child activities were held in the home on a one to one basis. The program was suggested as a ten week plan. However, a prior qualitative study of the program revealed that the actual time spent on the program varied from two weeks to six months based upon the interest level of the child.

Participants

The target population consisted of 96 prekindergarten children, age 4.0 to 5.5 and their parents. They were selected from a preschool population in the suburban area of San Diego. Forty of the children attended a city sponsored

parent participation preschool. The other 56 children attended one of three private preschools in the San Diego area.

The experimental group consisted of 45 parent-child dyads that elected to participate in PREP. These parents were informed of the program at either a parent meeting or through flyers brought home by their children. Although the experimental group was volunteer, it was assumed that the parents elected to participate based on their interest in the topic of the study. This reason for volunteering warrants maximum confidence in the subjects (Rosenthal and Rosnow, 1975). There was no supervision or guidance given to the parents or the children during the tutorial experience other than the

Table 4

Participants by Schools and Groups

Schools	Groups		Total
	Experimental	Control	
Preschool A	8	7	15
Preschool B	5	15	20
Preschool C	21	19	40
Preschool D	11	10	21
TOTALS	45	51	96

instruction guide itself. Parents were given the Home Literacy Survey at the seminar. Randomly selected parents were contacted for a telephone interview following the program.

There were 51 parent-child teams in the control group. In two of the four preschools parents gave their permission for testing. In the other two schools, the entire population within the age range was tested as part of ongoing preschool measurement. Participants in the control group were not provided with the instructional guide during the treatment period. During the study, the control group children received the same in-school instruction as the children in the experimental group. During the study, parents were sent the Home Literacy Survey. The return rate for the control group was 57%.

Table 5 illustrates the subgroups in the study. Subgroups examined were girls vs. boys, older children vs. younger children, and children from academic vs. non-academic preschools. A review of the literature suggests that these three factors can be considered fundamental in the development of reading ability and attitudes (Bloom, 1981; Feitelson, 1982; Swoyer, 1985).

Older children were defined as children who were between the ages of five and five-and-a-half at the time of the posttest. Younger children were four years old at the time of the posttest. Children who attended Preschool C were enrolled in Parent-Participation classes provided by San Diego Adult Education. They were classified as attending a non-academic preschool. The philosophy of San Diego Adult Education was to provide a social experience for the children. Parents provided craft activities and snacks, and there was structured playtime. The children did not do worksheets and were not introduced to letter names or sounds. Children attended Preschool C for a half-day, two or three times per week.

Table 5

Population Subgroups

Subgroup	Groups		Total
	Experimental	Control	
Sex			
Girls	21	25	46
Boys	24	26	50
Age Type			
Older	20	26	46
Younger	25	25	50
Preschool Type			
Academic	24	32	56
Non-academic	21	19	40

Children who attended the other three preschools were in a more academic setting although this was not pushed or stressed. At Preschool D children were introduced to letter names and sounds, and did optional daily worksheets on letters and numbers. At Preschool A children were introduced to letter names and sounds with occasional worksheets. At Preschool B children were exposed to letters and numbers, but worksheets were not used.

Instrumentation

Achievement Testing

Letter-sound recognition. Children were shown lowercase letters of the alphabet, randomly ordered in sets of five letters, and asked to give the sound that went with the letter. The letter "s" was used as an example and not included in the child's score. If a consonant had more than one sound, a point was scored for any correct sound given. If long vowel sounds were given, the child was asked for the short vowel sound. The total score represented the number of sounds that were correctly given. The maximum score was 25.

Word recognition. Children were tested on their sight vocabulary using one of two subsets of ten phonetic words randomly selected from the Dolch List (Dolch, 1951). The Dolch List has been used for over 30 years as a standard measure of reading ability (Johnson, 1971). Due to the age and attention span of the children, ten words were used. This number of words per level is used in the San Diego Quick Assessment of Reading Ability (Potter & Rae, 1973) and in the Quick Survey Word List (Ekwall, 1979). Only phonetic words were used, since the PREP program is a phonics approach. The total score represented the number of words read. The maximum score was ten points.

Paragraph reading. Children who tested above 50% on the Dolch List were given a simple paragraph to read from the Ekwall Reading Inventory (Ekwall, 1979). The Inventory provided graded passages that indicated word analysis skill and comprehension level. This measure was based on the Harris-Jacobson Readability Formula (Ekwall, 1979, p. 14). This measure was selected to insure that achievement levels were fully explored (see Appendix E).

Exclusion of subjects. Children who scored more than 50% on Letter-Sound Recognition at the time of the pretest were not included in the study, nor

recommended for the PREP program. This precondition insured that the initial differences between the experimental and control groups were minimal.

Attitude Testing

Interview Questions. At the beginning of the testing session, children were asked four attitudinal questions. They were asked how they felt about looking at books and how they felt about reading. They were also asked if they knew how to read. If they answered "no" they were asked when they expected to learn. If they answered "yes," "a little," or gave any other positive response, they were asked when and how they learned to read (see the Appendix A). Their answers were recorded verbatim.

Young children's reading attitudes scale. (Saracho, 1986) This measure asked children to choose between a sad, neutral or happy face in response to statements defining reading attitudes. There were twelve statements that yielded a total score of 36. A high score indicated a positive attitude toward reading, a low score indicated a negative attitude (see the Appendix B). This measure was developed for three, four and five year old children in 1986. The criterion related validity of the measure was established by comparing test scores with teacher's ratings of children's attitudes. The results of the comparison indicated predictable and significant differences at the .001 level. Two estimates of score reliability were available. Using the Spearman-Brown Reliability Formula, the reliability of the test averaged .87. The test-retest reliability coefficient for the total score over a four week interval was .95. A comparison of boys and girls indicated little difference.

Administration of Achievement and Attitude Measures.

The achievement and attitude measures were given individually to the children in their classroom settings. The researcher and two assistants administered all of the measures. The assistants were coached on using the materials, and did pilot testing for reliability with the researcher. The researcher and her assistants did not know whether the child being tested belonged to the experimental or control group during the pre- and posttesting.

Parent Measures

Home literacy survey. This was a self-administered parent checklist of the home reading environment. It contained eleven items developed by the researcher, which included the process variables researched by Bloom (1981), and were based upon the work on environmental reading influences by Dave (1963). For the purpose of achieving validity, three faculty members, two of them reading and curriculum specialists, reviewed the survey and made suggestions for amendment and clarification. In addition to questions on home environment, the survey also asked for optional demographic information on the number of children in the family, the education levels of the parents, and whether both parents work outside the home (See Appendix F).

Parent interviews. At the conclusion of the program, 50% of the parents participating in the experimental group were selected by random stratified selection and interviewed by telephone. The four level stratification was based upon the child's enrollment in preschool. The interviews were structured by topic, but open-ended in the manner of questions asked. The focus of the interview was to discover the parents' perceptions of their child's reading behaviors and attitudes, and to obtain the parents' opinions of parental tutoring and PREP.

Data Analysis

Quantitative Data.

Questions that addressed the outcomes of the PREP program were addressed by quantitative measures. Participants in the study were pretested and posttested on the number of letter sounds they recognized; the number of words they could read; and their score on the PrePrimer Test of the Ekwell Reading Inventory. These scores were compared using a factorial analysis of variance which had been adjusted for the difference in pretest scores (Borg & Gall, 1983, Cook & Campbell, 1979). The analysis of variance is robust with the assumptions that the groups are of similar size, and have a common slope (Huck, Cormier & Bounds, 1974).

Statistically controlling for the variation attributed to the covariate (pretest scores), reduced the error of variance (Hinkle & Cox, 1988). The interactions between sex, age and type of preschool, the covariate and the dependent variable were explored using the statistical program, SPSSX (1983).

The pretest scores on the Young Children's Reading Attitudes Scale were compared with the national means for four and five year old girls and boys (Saracho, 1986). Pretest scores were adjusted, and the posttest scores evaluated using the factorial analysis of variance, with the factors of sex, age and type of preschool. Assumptions that the groups were of similar size, and have a common slope were met. The .01 level of significance was used to evaluate the relevant *F*-ratios in the hypothesis testing. The experimental and control groups were compared on factors in the home environment using an independent *t*-test of the means. The level of significance was set at .10. The following factors were evaluated:

1. Television viewing time
2. Availability of books in the home
3. Subscription to a daily newspaper
4. Weekly read aloud time
5. Onset of reading aloud to the child
6. Frequency of library use
7. Sibling age
8. Parent education
9. Parent employment

Within the experimental group, children were divided into achievers and non-achievers based upon their scores on the achievement measures. Using this division, significant factors on the Home Literacy Survey were compared using the independent samples chi-square test.

Qualitative Data

Responses to the qualitative research questions were documented. Comparisons were drawn between the way children say they felt about looking at books and reading, and their scores on the Young Children's Reading Attitude Scale. The number of children who said they could read was compared with the number who were reading words at the time of the posttest. The age at which these children expected to learn to read was also discussed.

Parent interviews provided data on qualitative measures. Although the population was assumed to be generally homogeneous, stratifying the sample based upon preschool subgroups insured that each parent seminar group would be represented, and that the influences of the preschool experiences would be minimized. The strata are listed in Table 6.

Table 6

Random Stratified Selection of Subjects for Interview

School	Number of Candidates = 45	Number of Subjects = 23
A	8	4
B	5	2
C	21	11
D	11	6

Parents reported changes of attitude and behavior that they felt were a result of the program. Parents commented on how they felt about teaching their preschool children learning skills. The opinions given by parents on the PREP program concluded the results section.

Chapter IV

Analysis of the Data

Introduction

This study was designed to investigate the effects of an early reading program on the achievement and attitudes of preschool children and their parents. The purpose was to determine if those parent-child dyads who participated would benefit in their letter recognition and word recognition skills, and if the children's reading attitudes would be positively or negatively affected by participation in the program.

A second purpose of the study was to examine the home literary environments of the participants. Selected home factors were investigated to determine possible correlation with the decision to participate in an early reading program or with successful achievement in that program.

Finally, the study gathered information from participants on how children see themselves as incipient readers; on how parents see themselves as reading teachers; and on how the early reading program impacted these views.

Subjects

Ninety-six children, ages four to five-and-a-half, and their parents, participated in the study in the Spring of 1988, or in the Spring of 1989. The research design consisted of an experimental group of 45 children and their parents, and a control group of 51

children and their parents. Due to the nature of the program, the experimental group was composed of volunteer participants.

Research Questions

The following section will consider each of the research questions using data from the pre- and posttests, personal interviews with children in the study, telephone interviews with their parents, and data collected from the Home Survey. Tables and charts are presented to illustrate the material.

Research Question 1

Did children learn letter sounds and word attack skills as a function of their parents using the PREP home teaching program?

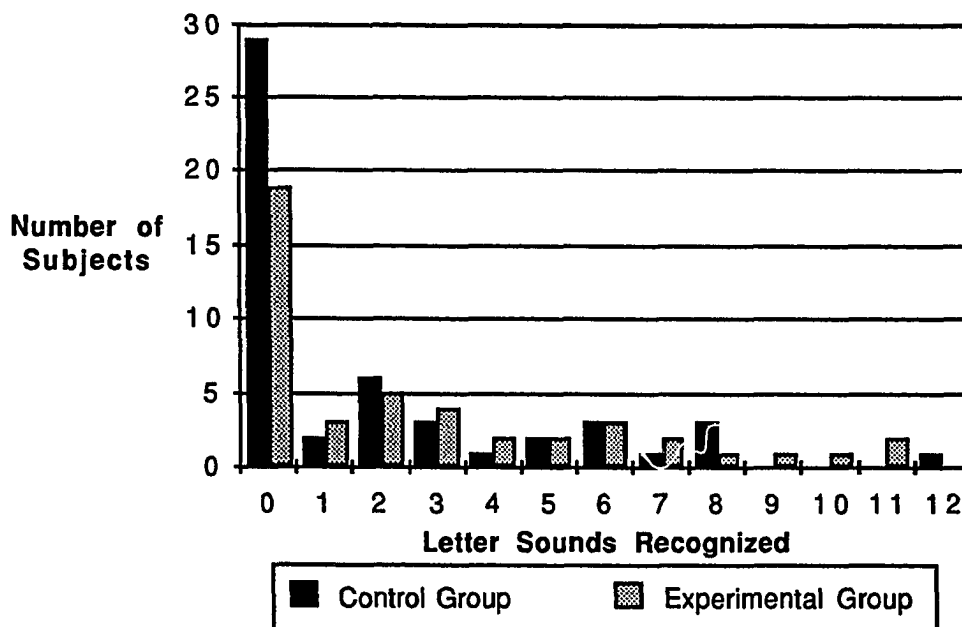
- H₀1 There will be no significant difference in the number of letter sounds recognized by preschoolers who have participated in PREP and comparable preschoolers who have not participated in PREP.
- H₀2 There will be no significant difference in the number of words, from the abbreviated Dolch list, recognized by preschoolers who have participated in PREP and comparable preschoolers who have not participated in PREP.
- H₀3 There will be no significant difference in the number of PREP children who are able to read from the Ekwall Reading Inventory and the number of non-PREP children who are able to read from the Ekwall Reading Inventory.

Pretest Measures

Children in the control and experimental groups were individually given a letter recognition test and a word recognition test as a pretest measure (see Appendices C and D). Children who could correctly say thirteen or more letter sounds or recognize any of the words on the word list were excluded from the study. Sixteen children whose parents had not enrolled in the reading program were excluded from the control group on this basis.

The pretest scores on letter sound recognition for the control and the experimental groups were very similar, as illustrated in Figure 1. The mean score for the control group was 1.92 letter sounds, and the mean score for the experimental group was 2.43. As shown above, the range for the control group was 0 to 12 letters, and the range for the experimental group was 0 to 11. The variances were 6.21 and 6.10 respectively. A t-test of independent means returned a test statistic of .08, which was not significant.

Figure 1. Pretest scores of letter sound recognition.



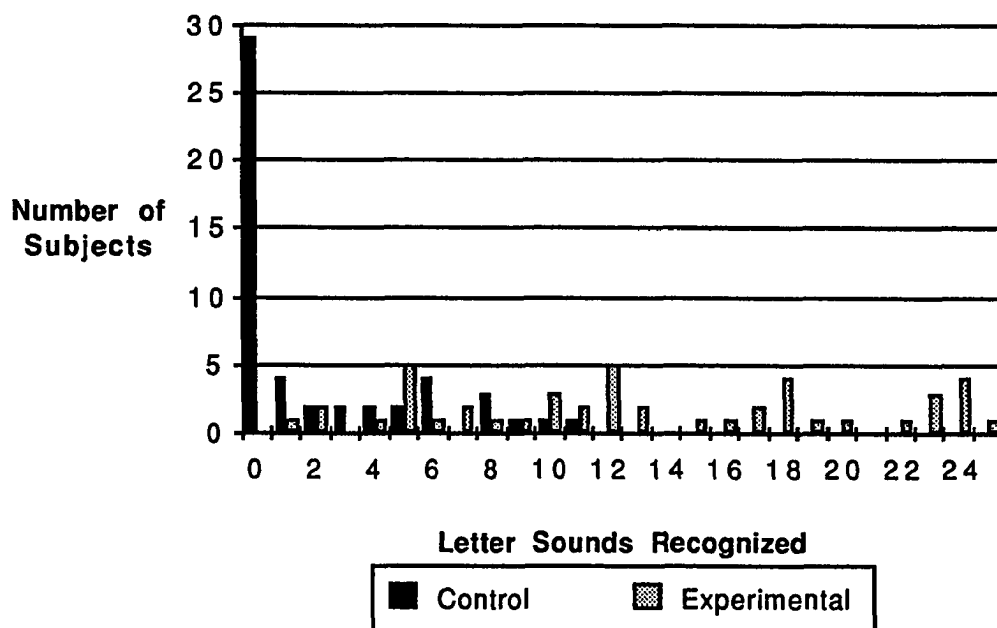
None of the children in either group were able to correctly identify words on the Word Recognition List (Appendix D), or read a passage from the Ekwall Reading Inventory (Appendix E).

The researcher concluded that the children who participated in PREP and the children who did not participate in PREP were comparable on early reading skills.

Posttest Measures

Letter Sound Recognition. Children in the control and experimental groups were individually given a letter recognition test as a posttest measure (Appendix C). The posttest scores on letter sound recognition for the two groups were visibly different, as illustrated in Figure 2.

Figure 2. Posttest scores of letter sound recognition.



The mean score for the control group was 2.06 letter sounds, and the mean score for the experimental group was 13.22 letter sounds. As shown in Figure 2, the range for the control group was 0 to 11 letters, and the range for the experimental group was 1 to 25.

An analysis of covariance was used on the data to test the effects of treatment vs. control with the interactions of age, sex and type of school. The use of the analysis of covariance design was to control statistically the initial differences in the the pretest scores which might have confounded differences between the two groups of subjects.

The main effects studied were:

- A. Groups: Treatment vs. control
- B. Age: Younger (4.0 to 4.9 years old during the study) vs. older (5.0 to 5.5 years old during the study)
- C. Sex: Male vs. female
- D. School: Academic vs. non-academic

The tests resulted in only one significant effect: Children in the treatment group recognized significantly more letter sounds than children in the control group. All other main effects and interactions were non-significant. Null hypothesis (1) was therefore rejected.

Word Recognition. None of the children in the control group were able to recognize words on the Word List at the time of the posttest. Children in the Experimental group recognized from 0 to 10 words, with a mean of 1.96 words. Twenty nine children (64%) in the experimental group recognized no words. The number of words recognized by the remaining sixteen subjects (36%) is illustrated in Figure 3.

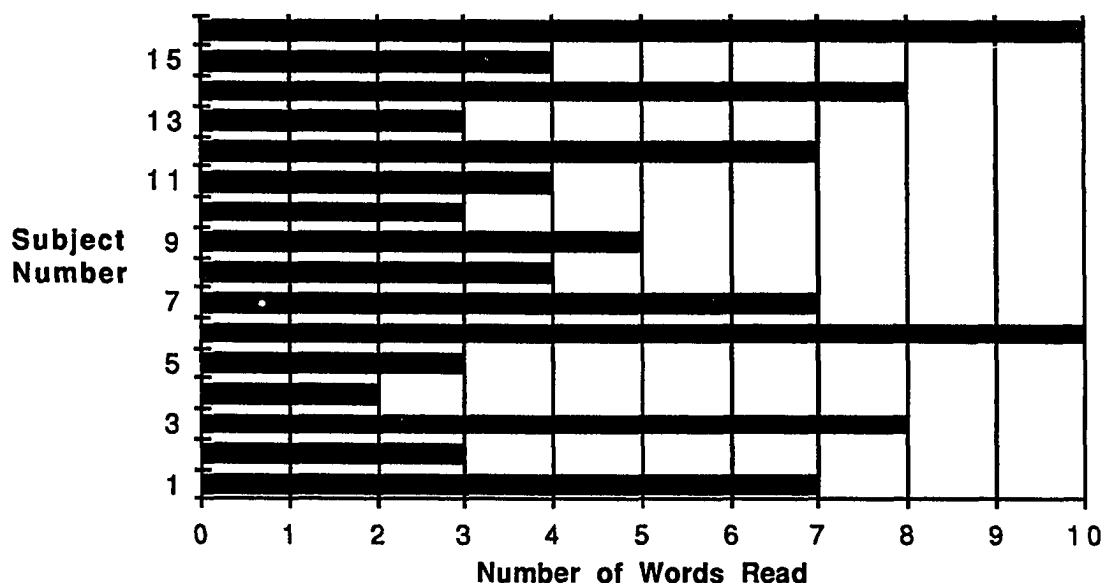
Table 7

Posttest scores of Letter Sound Recognition Adjusted by Pretest Scores

	Source	df	MS	F
Group	(A)	1	2425.81	123.86 *
Age	(B)	1	7.61	0.39
Sex	(C)	1	0.00	0.00
School	(D)	1	0.03	0.00
A X B		1	3.30	0.17
A X C		1	5.39	0.28
A X D		1	5.50	0.28
B X C		1	24.36	1.24
B X D		1	19.33	0.99
C X D		1	17.72	0.91
A X B X C		1	21.98	1.12
A X B X D		1	4.52	0.23
A X C X D		1	45.23	2.31
B X D X D		1	9.76	0.50
A X B X C X D		1	5.29	0.27
	Residual	79	19.56	
	Total (N - 1)	95	60.21	

* $p < .01$.

Figure 3. Word Recognition by High Achievers in Experimental Group



Note. All of the children in the experimental group scored 0 on the Word Recognition Pretest.

An independent samples chi-square test was used to determine the significance of word recognition by the experimental group in relation to word recognition by the control group. The cell entries were the number of children who read one or more words, and the number of children who read no words on the word list. The results listed in Table 8 indicate a highly significant difference between the groups on word recognition scores. None of the children in the control group were able to read words, while 16 of the children in the experimental group could read one or more words. Null hypothesis (2) was rejected.

Table 8

Word Recognition by Treatment Groups

Word Recognition	Group Type			
	<u>Control</u>		<u>Experimental</u>	
	N	%	N	%
Yes	0	0%	16	36%
No	51	100%	29	64%

$\chi^2 (1, N = 96) = 21.76, p < .001$

Ekwell Reading Inventory. None of the children in the control group were able to read the selected passage from the Reading Inventory (Appendix E). Three of the children from the experimental group (7%) read the passage with five errors or less. Although it is interesting that these three children were able to move from non-reading into paragraph reading within the time span of twelve weeks, the number was not large enough to analyze for significance. Null hypothesis (3) is therefore accepted.

Research Question 2

Did participation in the PREP home teaching program have any effect on the child's attitudes towards reading?

H₀₄ There will be no significant difference in the posttest score of preschoolers who have participated in PREP and comparable

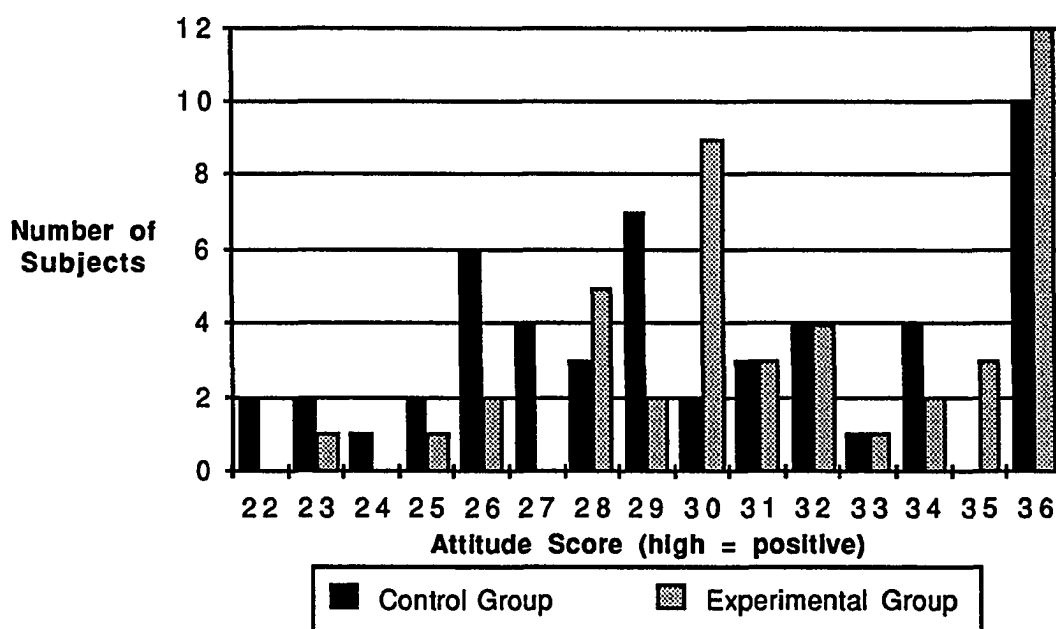
preschoolers who have not participated in PREP on the Preschool Reading Attitude Scale.

Pretest Measures

Children in the control and experimental groups were individually given the Preschool Reading Attitudes Scale (see Appendix B). The pretest scores on reading attitude for the control and the experimental groups are illustrated in Figure 4.

The mean score for the control group was 29.90, and the mean score for the experimental group was 31.71. The Preschool Reading Attitudes Scale has been normed with a mean of 30.23 for a four and five year old population. As shown in Figure 4, the range for the control group was 22 to 36, and the range

Figure 4. Pretest scores of reading attitude.



for the experimental group was 23 to 36. The variances were 17.93 and 11.21 respectively. A chi-square analysis of the scores revealed a significant difference between the groups. The results are illustrated in Table 9.

The results of the chi-square analysis indicate that in the pretest, children in the experimental group had a more positive attitude towards reading than did children in the control group. In the subsequent comparison of changes in attitude scores, this initial difference was statistically controlled by the use of the analysis of covariance.

Posttest Measures

After a twelve week interval, all children in the study were again given the Preschool Reading Attitude Test. The scores of the two groups are illustrated in Figure 5. The mean score for the control group was 30.76, and the mean score

Table 9

Attitude Pretest Scores by Treatment Groups

Pretest Attitude Scores	Group Type			
	<u>Control</u>		<u>Experimental</u>	
	N	%	N	%
22-27	17	33%	4	9%
28-32	19	37%	23	51%
33-36	15	30%	18	40%
$\chi^2 (2, N = 96) = 19.82, p < .001$				

Figure 5. Posttest scores of reading attitudes.

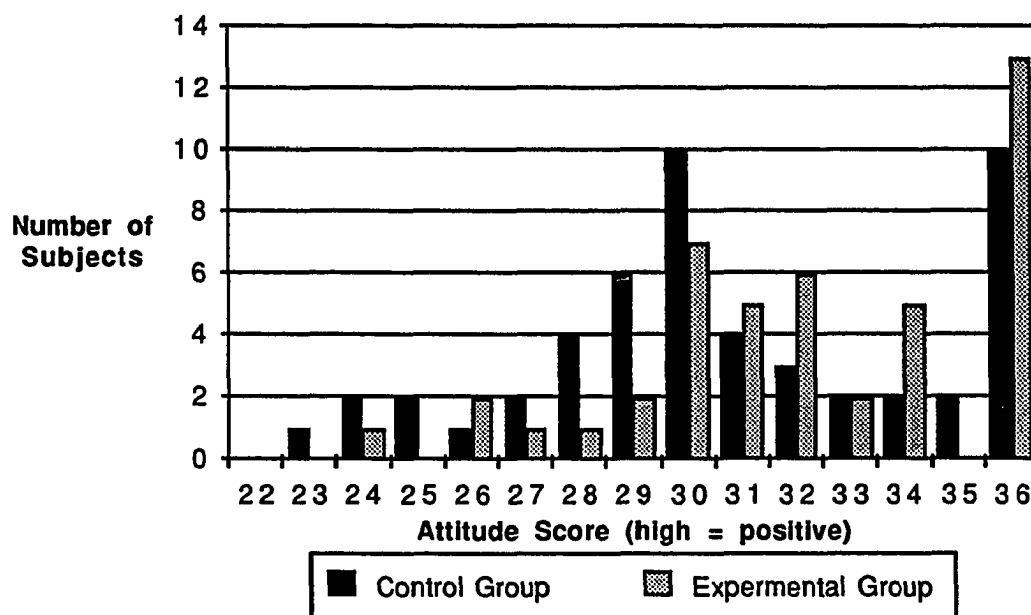


Table 10

Attitude Posttest Scores by Treatment Groups

Posttest Attitude Scores	Group Type			
	Control		Experimental	
	N	%	N	%
22-27	8	16%	4	9%
28-32	27	53%	21	47%
33-36	16	31%	20	44%

$\chi^2 (2, N = 96) = 14.88, p < .001$

for the experimental group was 32.22. As shown in Figure 5, the range for the control group was 23 to 36, and the range for the experimental group was 24 to 36. A chi-square analysis of the scores again revealed a significant difference between the groups. The results are illustrated in Figure 5.

The results of the chi-square analysis are listed in Table 9. In the posttests on reading attitudes, children in the experimental group had a more positive attitude towards reading than children in the control group. These results confirm the differences shown by the chi-square analysis of the pretest attitude scores.

An analysis of covariance was used on the data to test the effects of treatment vs. control with the interactions of age, sex and type of school. The analysis of covariance design statistically controlled for the initial differences in the pretest scores which might have confounded differences between the two groups of subjects.

The main effects presented in Table 11 are:

- A. Groups: Treatment vs. control
- B. Age: Younger children (4.0 to 4.9 years old) vs. older children (5.0 to 5.5 years old) during the study
- C. Gender: Male vs. female
- D. School: Academic preschools vs. non-academic preschools

The results indicated that only one interaction was significant at the $p < .05$ level. This was the interaction of younger children in the experimental group attending an academic preschool. This interaction was deemed to be a result of the number of effects and interactions and it was rejected as spurious. This interaction was not significant at the $p = .01$ level. There was no difference in the other factors and interactions. Null hypothesis (4) was accepted.

Table 11

Posttest scores of Reading Attitude Adjusted by Pretest Scores

	Source	df	MS	F
Group	(A)	1	13.74	1.31
Age	(B)	1	0.59	0.06
Sex	(C)	1	8.70	0.83
School	(D)	1	5.82	0.55
A X B		1	2.35	0.22
A X C		1	3.05	0.29
A X D		1	0.56	0.05
B X C		1	7.74	0.74
B X D		1	2.76	0.26
C X D		1	0.03	0.00
A X B X C		1	1.86	0.18
A X B X D		1	52.94	5.03*
A X C X D		1	15.25	1.45
B X D X D		1	1.26	0.12
A X B X C X D		1	0.03	0.00
	Residual	79	10.53	
	Total (N - 1)	95	12.50	

Note: * indicates significance at the $p < .05$ level

Research Question 3

Were there statistically significant differences between the scores of subgroups in the population?

- H₀5 There will be no significant difference in scores attained on the achievement and attitude measures by girls in the study population and boys in the study population.
- H₀6 There will be no significant difference in scores attained on the achievement and attitude measures by younger children in the study population and older children in the study population.
- H₀7 There will be no significant difference in scores attained on the achievement and attitude measures by children in public, non-academic preschools and children in private, academic preschools.

Girls vs. Boys

The analyses of covariance on posttest scores of letter sound recognition (Table 7) and reading attitudes (Table 11) demonstrated that the interaction of gender was non-significant for these measures. An independent samples chi-square test was used to determine if girls recognized significantly more words than boys in the studied population. The results listed in Table 12 indicate no significant difference between the groups. Null hypothesis (5) was rejected.

Table 12

Word Recognition by Gender Groups

Word Recognition	Group Type			
	Female		Male	
	N	%	N	%
Yes	8	17%	8	16%
No	38	83%	42	84%

$\chi^2 (1, N = 96) = 0.31$

Younger Children vs. Older Children

A second interaction studied was the effect of age. The age boundary of the study was 4.0 - 5.5 years old at the time of the pretest. Younger children were those boys and girls who were four at the time of the posttest. Older children were five at the time of the posttest. The analyses of covariance on posttest scores of letter sound recognition (Table 7) and reading attitudes (Table 11) demonstrated that the interaction of age was non-significant for these measures. An independent samples chi-square test was used to determine if younger children recognized significantly more words than older children in the studied population. The results listed in Table 13 indicated no significant difference between the groups. Null hypothesis (6) was rejected.

Table 13

Word Recognition by Age Groups

Word Recognition	Group Type			
	<u>Younger</u>		<u>Older</u>	
	N	%	N	%
Yes	7	14%	9	15%
No	43	86%	53	85%

$$\chi^2 (1, N = 96) = 0.53$$

Academic vs. Non-Academic Preschools

A third interaction studied was the effect of attendance at an academic or non-academic preschool. The analyses of covariance on posttest scores of letter sound recognition (Table 7) and reading attitudes (Table 11) demonstrated that the interaction of preschool attendance was non-significant for these measures. An independent samples chi-square test was used to determine if there was a significant difference of word recognition based on preschool attendance. The results listed in Table 14 indicate no significant difference between the groups. Null hypothesis (7) was rejected.

Table 14

Word Recognition by Preschool Groups

Word Recognition	Group Type			
	Academic		Non-Academic	
	N	%	N	%
Yes	12	21%	4	10%
No	44	79%	36	90%

$\chi^2 (1, N = 96) = 2.19$

Research Question 4

Were there statistically significant differences in the home environments of families who chose to participate in PREP and families who did not choose to participate?

H₀8 There will be no significant difference between home environments of families who participate in PREP and families who do not participate in PREP as measured by the Home Literacy Survey (Appendix F).

Parents who participated in the parent seminars were asked to complete a the Home Literacy Survey. Forty-two of the 45 parents (93%)

in the PREP program returned the survey. Parents who did not participate in PREP were either mailed the survey or the survey was sent home with their child from preschool. A stamped, return address envelope was included. Twenty-nine of the 51 parents (57%) returned the survey.

Responses from the treatment groups to the following questions were analyzed using the independent samples chi-square test:

1. Onset age for reading aloud

At what age did you begin to read aloud to your child?_____

2. Reading aloud sessions per week

Do you read aloud to your child?_____ If so, how often?_____

3. Library visits per month

Do you use the public library_____ If so, how often?_____

4. Child's television viewing per day

How many hours per day does your child watch TV?

5. Child's relationship to siblings

Does your preschooler have an older brother or sister?_____ age?_____

6. Daily newspaper read by parent(s)

Do you have the following in your home? Daily newspaper_____

7. Parents' education level

Highest educational level completed by Mother_____ Father_____

8. Parents' goals for child's education

What are your career/education goals for your child?

The results of the data analysis are presented in Table 14.

Table 15

Self-Reported Home Variables by Treatment Groups

Home Factor	Group Type			
	Control		Older	
	N	%	N	%
(1) Onset age for reading aloud				
Months				
birth+	10	30%	21	50%
6 months+	17	52%	9	21%
1 year+	6	18%	12	29%
$\chi^2 (2,75) = 5.79, p < .10$				
(2) Reading aloud sessions per week				
Number of sessions				
Less than 7	8	24%	10	24%
Daily	25	76%	25	60%
More than 7	0	0%	7	16%
$\chi^2 (2, 75) = 3.59$				
(3) Library visits per month				
Number of visits				
0 to 1	27	82%	23	55%
2 or more	6	18%	19	45%
$\chi^2 (1, 75) = 6.09, p < .05$				

Table 14 (contd.)

Home Factor	Group Type			
	Control		Older	
	N	%	N	%
(4) Child's television viewing per day				
Number of hours				
0 to 1	15	45%	14	33%
1 to 2	12	36%	20	48%
2 or more	6	19%	8	19%
$\chi^2 (2, 75) = 3.77$				
(5) Child's relationship to siblings				
Relationship				
Older sibling	15	46%	17	40%
Younger sibling	13	39%	21	50%
Only child	5	15%	4	10%
$\chi^2 (2, 75) = 1.61$				
(6) Daily newspaper read by parent(s)				
Response				
Yes	24	73%	32	76%
No	9	27%	10	24%
$\chi^2 (1, 75) = 0.12$				

Table 15 (contd.)

Home Factor	Group Type			
	Control		Older	
	N	%	N	%
(7) Parents' education level				
Level completed				
High School	22	36%	15	27%
College	22	36%	16	29%
Graduate School	17	28%	25	44%
$\chi^2 (1, 117) = 19.13, p < .001$				
(8) Parents' goals for child's education				
Goals				
College	18	64%	17	55%
Graduate school	6	21%	8	26%
Other	4	15%	6	19%
$\chi^2 (2, 59) = 2.41$				

Two effects were significant at the $p < .05$ level. The first was (3) the number of library visits per month ($\chi^2 (1, 75) = 6.09, p < .05$). Parents of children in the experimental group reported visiting the library two or more times per month significantly more often than parents of children in the control group. The other significant effect was (7) Parents' education level ($\chi^2 (1, 117) = 19.13, p < .001$). Parents of children in the experimental group had higher education levels than parents of children in the control group. All other factors were non-significant at the $p < .05$ level. One hypothesis, (1) Onset age of reading aloud, was significant at the $p < .10$ level ($\chi^2 (2, 75) = 5.79, p < .10$). Children in the

treatment group were read aloud to at an earlier age than children in the control group. Although this effect was rejected at the .05 level, the reader may want to consider the possible significance of this finding. Null hypothesis (8) was rejected for two of eight effects, and accepted for six of eight effects.

Research Question 5

Were there statistically significant differences in the home environments of children who excelled in letter and word recognition skills, and the home environments of children who did not excel in letter and word recognition skills?

H₀₉ There will be no significant difference between home environments of children who excel in letter and word recognition and children who do not excel in letter and word recognition skills as measured by the Home Literacy Survey (Appendix F).

Sixteen children recognized words on the Word List (Appendix D) and identified 10 or more letter sounds on the Letter Recognition Test (Appendix C). These children were classified as high achievers in the PREP program. The 26 children who were unable to read any words on the Word List were identified as low achievers, although 15 of these children were able to identify over 10 letter sounds. A broader analysis of achievement is included in the qualitative data which is presented in research questions 6, 7, 8 and 9.

Responses from the parents in the experimental group were divided into two sets, based upon the achievement level of the child. The data was compared using the independent samples chi-square test. The topics are listed in Research Question 4. The results are presented in Table 15.

Table 16

Self-Reported Home Variables by Achievement Groups

Home Factor	Achievement Group Type			
	Low		High	
	N	%	N	%
(1) Onset age for reading aloud				
Months				
birth+	10	38%	11	68%
6 months+	5	19%	4	26%
1 year+	11	43%	1	6%
$\chi^2 (1, 42) = 4.74, p < .10$				
(2) Reading aloud sessions per week				
Number of sessions				
Less than 7	7	27%	2	14%
Daily	14	54%	11	72%
More than 7	5	19%	2	14%
$\chi^2 (2, 42) = 1.70$				
(3) Library visits per month				
Number of visits				
0 to 1	17	65%	6	38%
2 or more	9	35%	10	62%
$\chi^2 (1, 42) = 3.11, p < .10$				

Table 16 (contd.)

Home Factor	Achievement Group Type			
	Low		High	
	N	%	N	%
(4) Daily newspaper read by parent(s)				
Response				
Yes	19	73%	13	81%
No	7	27%	3	19%
$\chi^2 (1, 42) = 0.36$				
(5) Child's television viewing per week				
Number of hours				
0 to 1	6	23%	8	50%
1 to 2	15	58%	5	31%
2 or more	5	19%	3	19%
$\chi^2 (2, 42) = 2.58$				
(6) Child's relationship to siblings				
Relationship				
Older sibling	6	30%	2	15%
Younger sibling	11	55%	10	77%
Only child	3	15%	1	8%
$\chi^2 (2, 42) = 1.60$				

Table 16 (contd.)

Home Factor	Achievement Group Type			
	Low		High	
	N	%	N	%
(7) Parents' education level				
Level completed				
High school	12	33%	3	14%
College	10	28%	6	29%
Graduate School	14	39%	12	57%
$\chi^2 (2, 57) = 19.39, p < .001$				
(8) Parents' goals for child's education				
Goals				
College	11	55%	7	58%
Graduate school	5	25%	3	25%
Other	4	20%	2	17%
$\chi^2 (2, 32) = 1.09$				

One effect was significant at the $p < .05$ level, (2) Parents' education level ($\chi^2 (2, 57) = 19.39, p < .001$). Parents of children in the high achievement group had higher education levels than parents in the low achievement group. All other factors were non-significant at the $p < .05$ level. Null hypothesis (9) was rejected for one of eight effects, and accepted for seven of eight effects.

Two effects were significant at the $p < .10$ level, and may be of interest to the reader. The first was (1) Onset age for reading aloud ($\chi^2 (1, 42) = 4.73, p <$

.10). Parents of children in the high achievement group reported that they began to read to their children at an earlier age than parents of children in the low achievement group. A second effect significant at the $p < .10$ level was (3) Library visits per month ($\chi^2 (1, 42) = 3.11, p < .10$). Parents of children in the high achievement group reported visiting the library two or more times per month more often than parents of children in the low achievement group. Although these effects were rejected at the $p < .05$ level, the data supports the trends reported in Research Question 5. The three effects in the home environment that may correlate with early reading are :

1. Education level of the parents. This effect was significant at the .05 level in both research questions.
2. Library visits per month. This effect was significant at the .05 level in Question 4, and at the .10 level in Question 5.
3. Onset age of reading aloud. This effect was significant at the .10 level in both questions.

Research Question 6

How do preschool children see themselves as readers?

To initiate the individual testing of each child, the following questions were asked:

How do you feel about looking at books?

How do you feel about reading?

Eighty-six percent of the children responded with positive or neutral answers. Positive answers included "fine, good, happy, and nice." More loquacious answers were, "It feels like going somewhere" or "It's real fun" and

"It's kind of funny." Neutral answers included shrugs, "I don't know", and "Some books are teared up. I like it, but not teared up!"

Thirteen of the children responded with negative answers. These responses are listed in Table 17 with the scores that these children received on the Reading Attitude Scale at the time of the testing.

Table 17

Negative Responses to Reading Questions Compared to Scores on the Reading Attitude Scale

Control Group		Experimental Group	
Comment	Score	Comment	Score
Boring	23	It's hard.	30
Not good	28	Tired	29
I don't like to read	26	I don't like to read	30
Boring	26	I can't even read yet	28
Sad, not very fun	24		
Sad, my sister wants books and takes them	27		
Boring	28		
A little boring	26		
Not very good	30		

The normed mean for the scale is 30.23. All of the children who expressed negative feelings about reading had scores which fell below the mean. There were also more children in the control group who expressed negative readings toward reading. This data supported the validity of the scores on the Reading Attitude Scale.

Children were also asked, "Do you know how to read?" Responses are listed in Table 18. None of the 18 children who answered "yes" in the control group were reading words at the time of the interview. This large percentage (35%) may be due to the fact that any answer other than "no" was accepted as positive. This response from these non-readers may also indicate that children have a far different definition of reading than is held by adults. This is certainly a topic for further research.

Table 18

Responses to Question, "Do you know how to read?"

Response	Group Type			
	<u>Control</u>		<u>Experimental</u>	
	N	%	N	%
Yes	18	35%	16	36%
No	33	65%	29	64%

In the experimental group, 10 of the 16 children who responded "yes" were reading words at the time of the post interview. The other six children in this group were unable to read words on the Dolch list but had a mean score of 9.17 on Letter Sound Recognition which indicated that they had gained in letter-sound recognition.

Children who responded that they could not read were asked, "When do you think you will learn to read? The responses are listed in Table 19.

The comments listed in Table 19 suggest that many four and five year old children in this population assume they will learn to read in the very near future. Sixty-four percent of the children questioned said that they expected to learn to read when they are four or five, or in Kindergarten. These comments may indicate that parents in this population have expectations that their children will learn to read in Kindergarten. Another possible source of information on reading age could be older siblings who were reading in Kindergarten. Preschool teachers could also have suggested that children learn to read in Kindergarten.

Children who responded that they could read were asked, "Do you remember when you learned to read?" The answers to this question are listed in Table 19. In the control group, although the children were *not* reading, a majority of them (78%) had definite answers as to when they learned to read. In the experimental group, a smaller proportion of the children (63%) offered information on when they learned to read. One difference between the responses is that three children in the experimental group suggested a location as the answer to the question. Only one of the children in the control group offered a location as an answer.

Table 19

Responses to Question, "When do you think you will learn to read?"

Response	No. of Respondents
"I don't know"	11
Age Response, "When I'm ...	16
4 (5 is really big, before I'm 5)"	1
5"	9
6"	3
8"	1
10"	2
School Response, "When I'm in ...	7
Kindergarten"	5
First grade"	1
College"	1
Size Response, "When I'm ...	11
Big"	4
Bigger"	1
Grown up"	6
Other ...	13
"When my Mom teaches me to"	3
"When I learn to tie" (shoes)	1
"My aunt teaches at the reading game"	1
"In 16 years"	1
"The next day; tomorrow; a couple of days, maybe on Friday; in a day or two"	5
"I already know how to learn how to read"	1
"When I'm old enough"	1
Total Responses	58

Table 20

Responses to Question, "Do you remember when you learned to read?"

Control Group	N=18	Experimental Group	N=16
"I don't know"	2	"I don't remember"	3
"No"	2	"No"	3
"Yes"	1	"Yes"	1
"A long time ago"	2	"A long time ago"	3
"3 years ago"	1	"A while ago"	1
"When I was 3"	4	"One night"	1
"On my birthday"	1	"At the table"	1
"When my sister wanted "a book I wanted"	1	"At the couch"	1
"Yesterday "	1	"Over at the bookstore"	1
"Today"	1	"March 8th"	1
"I just learned"	1		
"At home, a little"	1		

Children who said that they could read were then asked, "How did you learn to read?" The responses are listed in Table 21. The data in Table 21 is similar for the two groups, even though the experimental group actually did begin to read with help from their parents, and the control group was not yet reading. Thirty-one percent of the experimental group said that they learned to read with their mothers, and 39% of the control group said that a parent helped them learn to read. Five of these children listed their mother as helper. One

Table 21

Responses to Question, "How did you learn to read?"

Control Group	N=18	Experimental Group	N=16
"My Mommy..."	7	"My Mommy..."	5
"All by myself"	2	"All by myself"	4
"Sounding it out"	0	"Sounding it out"	4
"I don't know"	2	"From the Cinderella book"	1
"Sometimes I read in the dark at night"	1	"Some dinosaur books"	1
"From my friends"	1	"I climb trees and read"	1
"At my reading school"	1		
"I see the pages and then I read "	1		
"I got books easy to read"	1		
"I just do"	1		
"TV"	1		

child said, "My Dad taught me," and another commented, "Mommy and Daddy teach me how to do it."

One difference between the two groups is that children in the experimental group more often take credit for learning by themselves, or sounding the words out. Children in the control group who are not yet reading, are more likely to credit an outside source with learning to read.

Research Question 7

Do parents whose children participate in the program see altered reading behaviors or attitudes?

Twenty-three parents were contacted for a telephone interview following the posttests. The parents were selected by random stratified selection, based upon preschool groups as illustrated in Table 4, Chapter 3. To address Research Question 7, parents were asked, "Did you see any attitude or behavior changes, positive or negative, as a result of the program? The results are summarized in Table 22.

The five parents, who responded that their children read more as a consequence of the program, perceived their children as already having an interest in letters and reading. This factor motivated the parents to take the program. The exposure to reading letters and games in the program led their children into more reading behaviors. Two of the parents cheerfully reported that their children had become "almost obsessive" about reading.

Four parents reported that their children experienced greater self-esteem because of the program. One mother reported that her child was very shy. She felt that the program gave her daughter "a much more positive attitude". The mother said, "She has more self esteem and sees how she can grow." Another mother commented that the program gave her daughter "a sense of accomplishment." She said, "Megan feels real proud of herself when she recognizes a letter and finds it in books." One boy was reported to have said, "I can read everything." His mother felt the program gave him self esteem and self confidence. Another parent remarked that her son had an older sister

Table 22

Parent Evaluation of Altered Behavior or Attitude

Type of Change	Number of Respondents = 23
Positive	14
Reads more often	5
Increased self esteem	4
More excited about reading	4
More excited about writing	1
No change	5
Negative	2
Frustrated by vowel sounds	2
Did not use program	2

who read, and the boy "felt like he was in the same league with his sister" because of the program.

Four parents responded that their child became "more excited about reading" as a result of the program. Their comments included, "exhilarating, and so happy." One parent said that her daughter was "really excited about the short vowels, and found them in books and the paper." Another parent reported that her son became, "real excited about writing."

Two of the surveyed parents had negative responses to the program. One parent stopped the program at Week 4 because her daughter was "discouraged by the vowel sounds." The other parent continued through Week 6, but felt her son had "a bad attitude." She reported that he had trouble with the letter sounds. He is now in school, and "loves to read, but it doesn't come easily. "

His younger sister "caught on just being in the background." The mother plans to use the program with this child.

Two parents surveyed attended the parent seminar, but did not use the program with their children. The first reported that she "postponed it for a quiet time which never came." She plans to use it on the subject's younger brother. The second parent went through two of the five lessons in Week 1 with her son, but "he wasn't interested." She discontinued the program.

Research Question 8

How do parents feel about teaching their preschool children reading skills?

Respondents to Research Question 8 were the 23 parents randomly selected from the experimental group. Parents were asked, "Was it a problem being both parent and teacher? The results are summarized in Table 23.

Five parents felt that combining the role of parent and teacher was a problem with their preschool child. One mother reported that while they enjoyed the games, it was sometimes difficult for her son to *work* with her. She now leaves the program on the shelf, and lets her son "bring it up on his own." Another mother commented that her son seemed to have a shorter attention span at home than he did during learning periods at school. The child, however, was, "very happy with himself that he was progressing, and loved the games." One mother terminated the program when her daughter had difficulty with the vowel sounds. She said, "I think my daughter resented me having expectations."

Table 23

Parent's Views of Themselves as Teachers

Was it a problem?	Number of Respondents = 23
Yes	5
No	15
Not Applicable	3

Fifteen parents saw no conflict between the roles of parent and teacher. One parent noted "I am always teaching my kids." Two parents reported that in past learning programs, role conflict had been a problem. The first felt that PREP was not a problem because her son "had a strong desire and received so much praise." The second commented that she didn't combine the roles of parent and teacher well, but since "it (PREP) was just games, it was no problem." Another mother said that she was not initially enthused at being both parent and teacher. Her son, however, pushed her to use the program. Since he initiated the lessons, she saw no role conflict, and "it was fun to see him progress."

Three parents saw the dual role as a positive aspect of the program. One parent said, "I liked being both parent and teacher; it made me feel competent." Another parent felt, "It was one of the best parts." For two families, English was their second language. In the German family, the mother used the program with her daughter. She commented, "The program was more helpful to me than her; it was a tool for me."

The Iranian family was counted in the "not applicable" group because they hired a high school girl to use the program with their daughter. They found

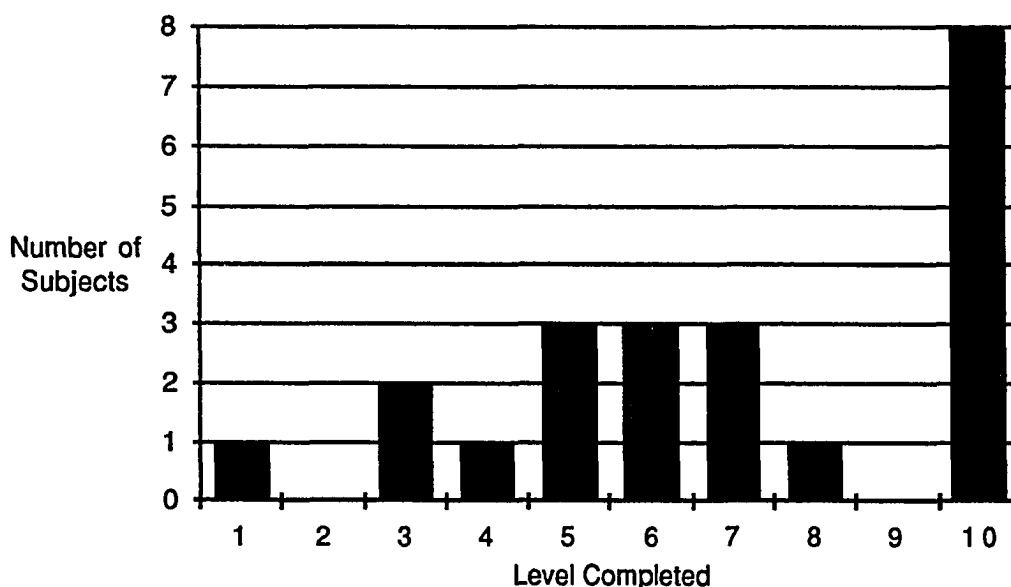
the program helpful to their own English learning, but did not experience the role of parent and teacher through the program. For the two families who attended the seminar but did not use the program, the question was not applicable.

Research Question 9

How do parents feel about the PREP program?

One measure of how parents felt about PREP, is how far they progressed in the ten levels of the program. In the seminar, parents were strongly encouraged to use the program at their own pace; to let their child direct the frequency of the lessons; and to discontinue the program if their child was not interested. Figure 6 illustrates the number of weeks completed.

Figure 6. Level completed by interviewed families in PREP. $N = 23$.



One family did not begin the program, and is listed as 0 on the chart. Three families are still actively progressing in the program. One of these families is currently at level six, and the other two are at level seven. Parents in these three families expressed their intention to complete the program.

The above figure indicates that over 78% of the families who attended the reading seminar continued to use the materials through level five. Parents who did not reach the mid-point in the program expressed the following reasons for discontinuing:

1. Discouraged by the vowel sounds (2)
2. Not enough time (2)
3. Lack of interest (1)

In the interviews, parents were asked, "How do you feel about the PREP program in general? Do you have any comments or suggestions? Three parents suggested that more games be added to the program. Five parents commented that their favorite part of the program was the games. Parents' comments that related to the overall content and outcomes of the program are listed in Table 24 along with the program level completed by the family dyad.

The majority of comments about the PREP program are positive. Parents who completed at least half of the program had more positive feelings than parents who elected to discontinue the program. Eleven families (48%) had finished the program or were making rapid progress towards completion. These respondents noted increased self esteem in their children and the benefits to the parent-child relationship. Eight families (35%) had progressed half-way and stopped or were progressing slowly. They commented on the

Table 24

Parent's Views of PREP N = 23

Weeks Completed	Parent Comments
0	We didn't use it. We were waiting for a quiet time which never came.
1	I didn't use it more than twice. He wasn't interested.
3	We didn't finish. I didn't follow through as much as I'd hoped.
3	He liked the games, but didn't like the vowels. I think it was just too early.
4	It's a good program. I would like to have started when he was younger.
5	I am very impressed with the program; I use it in my classroom.
5	She's reading like a champ.
5	He loves to read but it doesn't come easily. He has trouble sounding.
6	Dustin appreciated that I took the time; he loved the one on one time.
6 *	The vowels were difficult; he is very motivated to continue.
6	He says, "I can read everything, " which he can't. But it gave him self esteem.
7 *	Haley is very eager to do it. We use it at our own pace.
7 *	We really liked it; it is a good thing.

Table 24 (contd.)

Weeks Completed	Parent Comments
7	She loves it. The program is laid out real well.
8	I was sporadic with the program. It was a good way to make time together.
10	It fostered the parent-child relationship. It helped prepare him for school.
10	It is helpful to parents for whom English is a second language.
10	I have been thrilled. It helped her self esteem so much.
10	Cynthia has increased her reading time and interest.
10	Guiseppe was very motivated. It got him off on a good basis of reading.
10	It was really the key that unlocked the mystery of the words.
10	We did the entire program in 3 weeks. We absolutely loved it.
10	She just finished her first book and is so happy. I have been thrilled.

Note: * marks families who are still actively progressing in the program.

benefits of one-on-one time and the quality of the program itself. Four families discontinued the program for the reasons listed above. In all of the interviews with the mothers, the child and not the parent was stressed as the source of motivation to continue or discontinue the program.

Chapter V

Summary, Conclusions, and Recommendations

The primary purpose of this study was to determine whether parents who participated in a pre-reading program could influence their children in the area of beginning reading skills and attitudes. Specifically, the study assessed the effects of the Preschool Reading Experience Program on letter sound and word recognition skills, and the effects of the program on the reading attitudes of the children who participated.

A secondary purpose was to examine the home literary environments of the participants to determine if there were common factors in the home environments of the treatment and control families. Home environments of participants were also researched for factors that may have led to greater achievement in children who took the program.

In the study, the attitudes preschool children hold towards early reading were explored. The feelings mothers have about teaching their children to read were also investigated. Finally, the impact of PREP on the behavior and attitudes of mothers and children who participated in the program was researched.

A review of previous research on early reading demonstrated that a child's introduction to literacy begins at birth; that some children in the population are capable of reading before formal schooling; and that the home

environment plays a major role in the acquisition of reading skills and attitudes. The review also established that, with the exception of a televised parenting class, no prior research had been conducted on parent-child preschool reading programs, and that there has been no research on the impact of preschool reading programs on young children's reading attitudes.

The study was based on a quasi-experimental pretest, posttest nonequivalent control group design. The research included both quantitative and qualitative methodologies. Quantitative measures were employed to evaluate program outcomes. Qualitative measures were used as cross-validation and to appraise the processes of the program.

The subjects were 96 non-reading children between the ages of four and five-and-a-half and their parents. Of the participating parents, all but two were mothers. Two of the parents were fathers who attended the seminars and shared the program with their children. The children attended one of four preschools located in the San Diego area during 1988-1989. They were pretested on letter and word recognition and reading attitude. Children who recognized thirteen or more letters, or who read one or more words were not included in the study. Posttest scores on achievement and attitude measures were compared for subgroups based upon sex, age, and type of preschool. The treatment and control groups were equivalent except for the necessary voluntary commitment of the parents in the treatment group.

Data on program outcomes and processes was collected through individual pretests and posttests, and through interviews with preschool subjects and their parents. Parents contributed data through written questionnaires and telephone interviews. Analyses of covariance were used to compare pretest and posttest scores of letter recognition and reading attitude. Word-recognition scores were evaluated with the independent samples chi-

square test. Responses to the Home Literacy Survey were compared for treatment and control groups, and for high and low achievement groups using the chi-square test. Qualitative data was delineated and related to the quantitative findings.

Findings

Hypothesis Testing

In hypotheses 1, 2 and 3 the achievement of children who participated in PREP was compared to the achievement of children who did not participate in the program. Hypothesis 1 stated that there would be no significant difference in the number of letter sounds recognized by preschoolers who had participated in PREP and comparable preschoolers who had not participated in PREP. Hypothesis 2 stated that there would be no significant difference in the number of words, from the abbreviated Dolch list, recognized by preschoolers in the two groups. Hypothesis 3 stated there would be no significant difference in the number of PREP children who were able to read from the Ekwall Reading Inventory and the number of non-PREP children who were able to read from the Ekwall Reading Inventory.

Hypotheses 1 and 2 were rejected. Analysis of the data indicated that children who participated in PREP could recognize significantly more letter sounds and read more words than comparable children who were not exposed to the program. These differences were significant at the .01 level.

Hypothesis 3 was accepted. Three of the 45 PREP children were reading at the primer level at the conclusion of the 12 week study, and none of the non-PREP children were reading, but this number was too small for comparative analysis. Setting a 12 week limit on program outcomes was necessary for the purposes of this study. However, the effects of the program

on early reading may not be fully reflected in this short period of time. The strong evidence of attainment of letter and word recognition skills suggests that if the duration of the study had been longer, Hypothesis 3 would also have been rejected.

The effectiveness of PREP to teach reading skills to preschool children is consistent with the body of knowledge on early reading. Durkin's studies in Oakland (1961) and New York (1966), the Craft Project (1969) and research by Clark (1976) all indicate that preschool children from a wide range of background experiences are capable of beginning reading. Additionally, studies on parent programs have documented that parents are very effective at increasing their child's academic achievement.

Hypothesis 4 examined the reading attitudes of children in the study, stating that there would be no significant differences in the posttest scores of preschoolers who had participated in PREP and comparable preschoolers who had not participated in PREP on the Preschool Reading Attitude Scale. Based upon the test results, Research Hypothesis 4 was accepted. An analysis of covariance established that children who participated in PREP did not have significantly different gain scores on this attitude measure. The scores for both groups on pre- and posttests coincided with national norms for the four and five year old population.

Although Null Hypothesis 4 was accepted using quantitative measures, the qualitative information gained from parent interviews suggested changes in the attitudes of treatment children towards reading. Fourteen of the 21 parents who used the program noticed a positive attitude change in their children. Five of the parents noticed no change, and two parents noted a negative change.

The Preschool Reading Attitudes Scale may have been insensitive to positive changes. The highest score attainable on the measure is 36. Twelve

of 45 children in the treatment group scored the maximum positive score on the pretest, and the lack of gain in the posttest scores of the treatment group may be a result of regression to the mean or the upper limitation of the scale.

The importance of these findings is that both the attitude scores and parent comments did not reveal a significant number of negative attitude changes in children who participated in PREP over the twelve week period. Further research is needed to confirm the stability of the attitudes of early readers.

Hypotheses 5, 6 and 7 examined subgroups within the studied population on achievement and attitude scores. Hypothesis 5 stated that there would be no significant difference in scores attained by girls and scores attained by boys in the study population. Hypothesis 6 stated that there would be no significant difference in scores attained by younger children and scores attained by older children in the study population. Hypothesis 7 stated that there would be no significant difference in scores attained by children in public, non-academic preschools and children in private, academic preschools.

All three null hypotheses were accepted. Analyses of variance on letter-recognition scores and attitude scores revealed no differences within the studied subgroups. Chi-square analyses on word recognition scores also presented no significant differences between the studied subpopulations.

The absence of a significant difference between boys and girls on the achievement measures was unexpected. Studies have indicated that more boys than girls suffer from learning deficits, and score lower on tests requiring verbal ability (Maccoby & Jacklin, 1975). Gates (1961) studied reading scores of children aged two to seven. He noted that boys outnumbered girls among the lowest scorers by about 2 to 1 in the primary grades. The lack of a

significant difference between boys and girls in this study suggests that this deficit may no longer exist and further research should be initiated.

Hypotheses 8 and 9 examined the home literary environments of study participants. Chi-square analyses were used to compare differences in the home literary environment of PREP families and non-PREP families. Chi-square analyses were also used to compare the home literary environments of high achievers in the PREP program to the home environments of low achievers in the program.

Hypothesis 8 stated that there would be no significant differences between the home environments of families who participate in PREP and families who do not participate in PREP as measured by the Home Literacy Survey. The following factors were analyzed using the independent samples chi-square test:

1. Onset age for reading aloud
2. Reading aloud sessions per week
3. Library visits per month
4. Child's television viewing per day
5. Child's family position in relationship to his/her siblings
6. Daily newspaper read by parent(s)
7. Parents' education level
8. Parents' goals for child's education

Two effects that were significant at the $p < .05$ level. The first was (3) Library visits per month. Mothers of children in the experimental group reported visiting the library two or more times per month significantly more often than mothers of children in the control group. The other significant effect was (7) Parents' education level. All other factors were non-significant at the $p < .05$

level. Research Hypothesis 8 was rejected for two of the eight effects, and accepted for seven of the eight effects.

One effect, (1) the onset age of reading aloud, was significant at the $p < .10$ level. Parents of children in the experimental group reported that they began reading aloud to their children at an earlier age than parents in the control group.

Hypothesis 9 stated that there would be no significant differences between home environments of children who were high achievers in letter and word recognition and children who were low achievers as measured by the Home Literacy Survey. Children who were reading words and recognized more than ten letter sounds at the conclusion of the study were considered high achievers. The eight factors listed above were analyzed using independent samples chi-square tests.

One factor was significant at the $p < .05$ level, (7) Parents' education level. Parents of children in the high achievement group reported higher education levels than parents in the low achievement group. Research Hypothesis 9 was rejected for one of eight effects, and accepted for seven of eight effects.

Two factors were significant at the $p < .10$ level, and may be of interest to the reader. The first factor was (1) Onset age for reading aloud. Parents of children in the high achievement group reported that they began to read to their children at an earlier age than parents of children in the low achievement group. The second factor was (3) Library visits per month. Parents of children in the high achievement group reported visiting the library two or more times per month significantly more often than parents of children in the low achievement group. This data confirms the conclusion reached in Research Question 5. The researcher concluded that the education level of the parents, the onset age of

reading aloud, and use of the library are factors in the home environment that may encourage early reading.

Other Findings

Interviews were conducted with the preschool participants to discover their background assumptions about reading. When asked, "How do you feel about looking at books?" and, "How do you feel about reading?" eighty-six percent of the children responded with positive or neutral answers. This data supported the results of the Preschool Reading Attitude Scale, in which seventy-four percent of the children in the study scored at or above the normed mean on the posttest measure. In general, the preschool sample studied had a positive attitude towards reading.

In answer to the question, "Do you know how to read?" 35% of the total population answered that they did. In this group, the most frequently listed source of reading tutelage was the child's mother. Thirty-five percent of these children said that their mother had helped them learn to read.

Children in the treatment group were more likely than children in the control group to take credit themselves for learning to read. Five of these respondents named their mother as their resource, the other eleven claimed that they learned to read on their own. Approximately two thirds of this group (63%) were reading words at this time.

Most children (81%) who did not see themselves as readers had definite expectations of when they would learn to read. The majority (64%) presumed that they would learn to read when they were age four or five, or in Kindergarten.

Half of the mothers in the treatment group were randomly selected and contacted for a telephone interview. They were asked, "Did you see any

attitude or behavior changes, positive or negative, as a result of the program?" Fourteen (61%) of the respondents noted a positive change; five saw no change; two saw a negative change; and two did not use the program. The positive changes included increased self esteem, more reading time, and more excitement about reading. Mothers who saw a negative change discontinued using the program.

These mothers were also asked, "Was it a problem being both parent and teacher?" Fifteen of the respondents (65%) did not experience a role conflict. Of this group, three respondents felt that being both parent and teacher was a positive aspect of the program. Five of the respondents (22%) did have a problem with the dual roles. They reported that their children did not respond to their mothers in an instructive role.

Finally, the selected mothers were asked how they felt about the Preschool Reading Experience Program. Comments from respondents who completed the program or progressed at least half way through the program were extremely positive. Eleven families (48 %) had completed the program or were making rapid progress towards completion. These respondents commented on the increased self esteem in their children, the benefits to the parent-child relationship and the foundation for reading. Eight families had progressed half-way through the program and stopped or were progressing slowly. This group of respondents was also very positive about the program. They commented on the benefits of one-on-one time, and the quality of the program itself.

Four of the interviewed families (17%) did not progress past level three. Two families did not use it because they did not have the time. The other two families stopped due to lack of interest on the part of their children. Responses

to this question suggest that four out of five parents who took the reading seminar were able to effectively use the program with their child.

Conclusions

Based on the findings described in this study, the researcher has drawn the following conclusions:

1. Children who use the Preschool Reading Experience Program with their parents will increase their prereading skills in letter sound recognition and word recognition. There were significant differences in the achievement scores of children who participated in the program as compared to children who did not participate in the program.

2. Children who participate in the Preschool Reading Experience Program do not develop negative attitudes towards reading. Although some current authors have suggested that early readers can suffer from negative attitudes towards reading, this hypothesis was not supported by data acquired on the Preschool Reading Experience Program. On quantitative measures, there was no significant difference on the attitude scores of children who had participated in the program. On qualitative measures, the difference in attitude was positive. Many mothers who participated in the program reported that their children experienced greater self-esteem and spent more time reading as a result of the program.

3. Differences in sex, age, between the ranges of four and five-and-a-half, and type of preschool are not significant factors in acquiring prereading skills in a parent-child program.

4. There are significant factors in the home environment that may encourage early reading. One is the onset age of reading aloud. Another is use of the library, and a third is the education level of the parents.

5. Parents may be giving their children a reading advantage if they begin to read aloud to them before they are six months old. Children who were read to before the age of six months were more likely to have success in early reading achievement.

6. Parents may be giving their children a reading advantage if they use the library on a regular basis. Children who visited the library at least twice a month were more likely to have success in early reading skills.

7. Mothers are eager to work with their children towards educational goals. Only one family who attended the prereading seminar elected not to try the program.

8. Mothers are sensitive to the attitudes of their children in pursuing early reading programs. The rate at which the children progressed through PREP, and the level of the program that was completed was consistently reported to be child and not parent directed.

9. The majority of mothers do not have a problem being both a parent and a teacher. Although a few mothers experienced some difficulty playing a dual role, the majority did not find the duality a problem, and some even saw it as a benefit.

10. Parents will honor commitments to participate in their children's education. Over 80% of parents in the study maintained a commitment to the reading program for at least five weeks.

Implications of Results for Practice

This study provides important information to educators on the under-researched preschool population. A large number of children pretested at ages four and five were already reading. Other children were developing pre-reading skills. It is also clear from the reliability of the attitude testing and the

interviews with the preschool children that four and five year old children have developed definite opinions about books and reading. Educators do not begin to teach reading on a clean slate. While the researcher is not suggesting that preschool teachers should provide formal reading instruction, leaders in education need to see literacy and reading as a continuum that begins at birth, not when a child enrolls in school. Authors of elementary curriculum need to acknowledge and address early readers as well as non-readers.

The results of this study also have numerous implications for parents and parent educators who speak through writing, public forums or educational platforms. Parents do have the ability to significantly impact their children's acquisition of reading skills and attitudes. In this study, many parents expressed an interest in helping their children read. Approximately 30% of the mothers contacted for participation in PREP elected to attend the parent seminar. Of those parents, all but one mother pursued the program with their children. Most parents in this study also continued with the program over a period of at least five weeks even though they received no subsequent help or attention. Over 80% of the parents completed at least half of the program. Preschool and elementary educators could conclude from this study and others that parents are a very valuable and underused resource. Parents could realize that they have great potential to significantly affect the reading achievement levels of their children. Young children could significantly benefit from increased cooperation between schools and parents in the field of beginning reading.

Based on the review of the literature and the data collected in this study, there are numerous suggestions that could be made to parents. The first is that reading attitudes are more important than reading skills. Half of the non-readers in America are adults who choose not to read. Since children already

have formed attitudes toward reading by age four, it is important that parents recognize and address children's attitudes at an early age.

Reading aloud is critically important. Through reading aloud children learn the excitement of books, they develop their imagination, and they incorporate the cadence of our language. Reading in a warm, loving environment with their parent builds a connection between books and feeling safe and loved. Finally, reading aloud allows the parent to actively involve the child in reading. Children can turn the pages, point to the pictures, talk about the stories, ask questions, and eventually share in the reading process.

Since literacy begins with birth, parents need to accept some of the responsibility for their child's education. Prior to schooling, the parent can encourage and expose the child to learning. During the school years, the parent can become actively involved with teachers, planning committees and administrators. Finally, parents need to recognize that a teacher with half a day and 30 children can never give the time or encouragement that a parent can give their child. Parents are powerful teachers.

Teachers and administrators could benefit by enlisting the cooperation of parents. Parents in this study, as well as in prior studies, wanted to help their children, but didn't know how. If parents were more aware of the classroom curriculum, they could reinforce school instruction. School districts and teachers should consider expenditures for materials, such as easy games, books, reading lists, newsletters, activity suggestions and handouts that would include parents in the educational process.

The information generated in this study reflects on home literary environments. Results indicated that library use, parent education and reading aloud are factors that may promote success in reading. Social workers, psychologists, and family counselors could use the data to suggest ways for

families to improve their literary environments to affect their children's reading attitudes and skills. The data could also be used as a measure of the home environments and practices that children bring with them into public education. The data collected on the onset age of reading aloud, preschool children's television viewing hours and parent's goals for their children's education are interesting reflections on this population in the American culture.

Finally, the results of this study will be of benefit to researchers who can use this information and methodology to initiate further study on preschool populations and early reading.

Recommendations for Further Research

As a follow-up to the present study, a longitudinal study of the families who participated in this program is warranted. Factors worthy of exploration include:

1. Measures of additional progress in reading achievement by children in the experimental and control groups.
2. Measures of reading attitudes as children encounter formalized reading instruction.
3. Measures of reading attitudes as children increase their reading skills and external reading expectations are imposed.
4. Measures of long range effects of the program on the parents' attitudes towards their home literary environment and their child's school curriculum.
5. The use of PREP with younger siblings.

Replication of the present study in other settings would also yield valuable results. In this study, most of the children were Caucasian and

came from homes where there were two resident parents. Survey data also indicated that most mothers in the study did not work full time. The present study should be replicated in a multicultural settings and single parent homes to determine if similar effects are found.

The study could also be replicated in families where the children do not attend preschool. Such a study would be particularly useful since the literary environment of the children would be solely home based, rather than home and school based.

The computer has emerged as an alternate instructor. Reader Rabbit and other software programs have been written specifically for preschool children. A comparative study duplicating the game format used in PREP on the computer screen would help to define whether the positive achievement effects found in this study are a result of the parent-child interaction, or a result of the program format itself.

It would be interesting to replicate the format of the study using a different skill base, such as early mathematical concepts. In addition to possibly confirming the success of the parent-child format, this replication might indicate whether it is mothers who are linked to the education of their children, or whether the gender of parent involvement is subject based.

In general, long range studies are needed in the field of early reading. Studies by Durkin and others, while definitive in the 1960s, do not reflect the American family in the 1980s and 1990s. Sesame Street, day care, working parents and the home computer are cultural factors that may have had a substantial effect on the number of children who read prior to formal education, and on the continued reading achievement of these children.

Studies are also needed to collect information on reading attitudes at preschool, elementary and high school levels. At what age do "illiterate

literate" turn away from reading? Why? David Elkind and others have suggested that early readers pay an emotional price for their precociousness. Children who start Kindergarten as readers should be monitored for their emotional as well as their educational progress. Educators and parents need to find strategies to diagnose negative attitudes and intervene in children's defection away from the printed word.

The present study also suggests that further studies on the cultural origins of reading instruction would be of value. Only one child interviewed in this study cited his father as the person who would help him learn to read. Of the 45 people who attended the reading seminars, only two were fathers. Cultural studies are needed to examine why mothers, and not fathers, are cited by children as their reading teachers and role models. With parents sharing the work force, perhaps this predilection is indicative of an outdated cultural bias.

A Final Note

The researcher appreciates the time, effort and cooperation offered by children, parents and educators involved in this study. Participants at all ages and educational levels confirmed their interest in the reading process. The ability to read is highly valued in our society. It was an honor to contribute to the body of knowledge that supports and expands that value.

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Appendix A
Preschooler Questionnaire

Hi! My name is _____. What is your name? _____

(Child's name), I'd like to ask you some questions about reading.

1. How do you feel about looking at books?

2. How do you feel about reading?

3. Do you know how to read?

(If no) When do you think you will learn to read?

(If yes) Can you read books?

Do you remember when you learned to read?

How did you learn to read?

Appendix B

Attitude Scale

Here is a paper with 3 faces: a very sad face, a face that is neither happy nor unhappy (It's OK), and a very happy face. When I ask you how you feel about certain things, point to the face which shows how you feel.

There are no right or wrong answers. If I said, "How do you feel when you eat chocolate candy?" which face shows how you feel?...Someone may choose an unhappy face if he/she does not like chocolate candy, while someone else may choose a happy face because he/she like chocolate candy.

Now I'll read some questions to you and you will point to the face that shows how you feel about what I read. Remember to show how you feel.

HOW DO YOU FEEL.....

1. When you look at pictures?
2. When someone reads to you in your classroom?
3. When you look at books in the library?
4. When you read with others?
5. When the teacher reads you a story?
6. When you go to the library area in your classroom?
7. When you read with everybody?
8. When you share your books with your friends at the library?
9. When you tell a story to a friend?
10. When you check out books from the library?
11. When you talk about books?
12. When someone reads to you in a quiet place?

Appendix C

Letter-Sound Relationships

I am going to show you the letters of the alphabet to find out if any children your age know any of the letter sounds. I don't expect that you will know any of them. If you do know some, that is fine. If you don't know any of the sounds, that is fine too. You will be helping me either way.

Here is the letter 's'. The sound that goes with it is 'sssss'.

Here are more letters. Do you know the sounds that go with any of these letters?

...You did a fine job of looking at these letters and you helped me a lot.

Appendix D

Word Recognition

I don't expect that anyone your age will know these words. But I would like you to look at them to be sure. If you can read any of these words, please tell me:

got big ask let can if not ten at up

Alternate set:

as red on us am will six has sit but

Appendix E
Ekwall Reading Inventory

I don't think that anyone your age can read these words, but I'd like it if you would try.

Sam is a boy.

He has a dog.

The dog's name is Tim.

Tim is a big dog.

Children who could read the passage with five or fewer errors were scored as reading the inventory. Children who read with more than five errors were scored as not reading the inventory.

Appendix F

Home Literacy Survey (Parent Questionnaire)

NAME _____ CHILD _____

How many hours per day does your child watch TV? _____

Does your child regularly watch any of the following TV programs:

Sesame Street _____	3-2-1 Contact _____	Cartoons _____
Mr. Rogers _____	Evening News _____	Sit Coms _____

Do you have any of the following in your home?

Dictionary _____	Current Novels _____	Atlas _____
Encyclopedia _____	Daily Newspaper _____	Magazines _____
Parenting Books _____	Text books _____	Thesaurus _____

Do you read aloud to your child? _____ If so, how often? _____

At what age did you begin to read aloud to him/her? _____

Do you use the public library _____ If so, how often? _____

How many hours do you read for enjoyment, if any? _____

Which of the following activities does your family enjoy?

Hobbies _____	Zoo, museum visits _____	Music _____
Board games _____	Sports participation _____	Trips _____
Spectator sports _____	Computer/TV games _____	

What are your career/education goals for your child?

Optional demographic information:

Number of children in your family? _____

Does your preschooler have an older brother or sister? _____ age? _____

Highest educational level completed by Mother _____ Father _____

Do both parents work full time outside the home (yes/no) _____

Please list any additional comments on the back Thank you for your help.