

THE MEANING THAT CHILDREN ASCRIBE
TO PRINT AS A FUNCTION
OF EXPERIENCE WITH
BIG BOOKS

By

KAY LALLIER GRANT

Bachelor of Arts
University of Kansas
Lawrence, Kansas
1973

Master of Arts
University of Tulsa
Tulsa, Oklahoma
1982

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Thesis Approved:

Kathryn Castle

Thesis Adviser

David Yellin

Edna Wilson

Russell Olson

Norman N. Durham

Dean of the Graduate College

C O P Y R I G H T

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Kay Lallier Grant

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Five years ago when I was contemplating a new job and the beginning of a doctoral program I noticed a saying on the back of our church bulletin. It said "Choose a goal so difficult that you will know it is only with God's help that it can be achieved." This five year journey has been a prime example of a task which faith helped complete.

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CHAPTER I

INTRODUCTION

Differing views of educators on what children are like have resulted in various approaches to preparing teachers to work with young children and to conducting research. Many educators continue to debate what constitutes appropriate educational experiences for young children. This controversy over instructional methods is unresolvable unless we come to know the learning processes of the child, processes that a particular method may favor, stimulate, or block (Ferreiro & Teberosky, 1982). All too often in education the debate remains focused on the teacher, discussing the method used, technique followed, or the materials chosen. Less often is the focus on the process going on inside the child's head and the impact different methods have on facilitating the most important educational process - that which occurs inside the child - the construction of knowledge. The result is, "that success in learning is attributed to the method and not to the learner" (Ferreiro & Teberosky, 1982, p. 13). As Ferreiro and Teberosky have pointed out, "A method may help or hinder, facilitate or complicate, but not create learning.

Obtaining knowledge is a result of the learner's own activity" (p. 15). Taylor (1989) chastises the profession for the amount of time spent debating the teaching method and so little time considering the learner.

In the analysis of the effectiveness of a teaching material or method it is imperative that both sides of the interaction be scrutinized. This means that one must consider what children bring to the experience as well as the sense they make of their interactions with the environment. The focus should be on the child's process of assimilating and accommodating in an effort to make sense of the world and construct new knowledge (Piaget, 1967). It is time to look at the learning process from the child's point of view (Castle, 1989).

Looking at how children construct knowledge is a complex task. Jean Piaget is credited with the greatest body of research, writing and theory development in this area. His probing clinical interview technique provided insight into how children organize their world and how they actively construct, refine and revise their knowledge in an ongoing fashion (Piaget, 1967).

Though available since the 1930's, Piaget's theories have been difficult to apply to public educational practice. The American focus has traditionally been on the teacher, school, method or material while Piaget focused on the child. Constance Kamii has continued Piaget's studies and applied the theory to curriculum development. In

particular, she has studied the child's construction of number and from that deduced ways teachers could go about facilitating that construction (Kamii, 1985, 1989).

Ferreiro and Teberosky (1982) have generated research on the way in which children construct their knowledge about print and how that brings them to literacy in both reading and writing. As with Piaget and Kamii, Ferreiro and Teberosky found children actively develop their own hypotheses about how print works and use various ways to make meaning with print.

Piaget, Kamii, Ferreiro and Teberosky have all found children constructing knowledge in active, unique ways. Each child has unique variations and hypotheses which he/she brings to the situation. Teachers and parents do not teach, speak or write in the multitude of variations that children construct on their own. Adult variations are much narrower. If children were passively absorbing what the adult generation was passing along the wider, rich multitude of children's variations would be unexplainable. When children are acknowledged as unique and creative, capable of constructing their own variations of knowledge regarding our world, then children's approximations of adult standards which many educators term "mistakes," become the hope for the future. Piaget reflects that:

the goal of intellectual education is not to know how to repeat or retain ready made truths. It is learning to master the truth by oneself at the

risk of losing time and of going through all the roundabout ways that are inherent in real activity. (Piaget, 1974, p. 106)

How children learn has not changed. But researchers have begun looking and listening more carefully. When that happens many different people observe the same thing but call it by different names. Such is the case with reading and early childhood. Ferreiro and Teberosky (1982) wrote:

The path toward this objective knowledge is not linear. We do not move toward it step-by-step, adding bits of knowledge one on top of another. We reach it through great global reconstructions, some of which are erroneous (with respect to the ultimate goal) but constructive (in the sense that they allow us to reach it). This notion of constructive error is essential. In associationist psychology (and pedagogy) all errors are alike. In Piagetian psychology it is essential to be able to distinguish errors which constitute necessary prerequisites for arriving at the correct solution (p. 16).

Years earlier. Marie Clay (1966) and other reading researchers were analyzing the errors young children make while reading aloud and found that many such "errors" reflected children actually processing the text for underlying meaning but still making surface oral reading errors. Kenneth Goodman was the first to describe these

"errors" as "miscues" and launched a study of children's "miscues" as an indication the children were actively transacting with a text in order to construct meaning for themselves rather than haphazardly making mistakes. This miscue analysis combined research from psycholinguistics and developmental psychology and grew into the Whole Language theory of reading (Goodman, 1986; Altwerger, Edelsky and Flores, 1987).

Also in New Zealand with Marie Clay was Don Holdaway. His teaching career with Maori children caused him to look for different ways to bring literacy to non-traditional students. Holdaway in The Foundations of Literacy (1979) writes,

Listeners or readers do not have the meanings poured into them - they are not conducted to them directly through the sounds in the air or the marks on the paper; they make them from what is linguistically given in relationship to all that constitutes their own self-awareness. Thus the interpretation of language is a creative process even when the most basic skills are being practiced...(p. 153).

From early childhood, Foreman and Kushner (1983) found a young child puzzled by what he sometimes observed,

...it is because he has contrasted the two events and these contrasted events have generated an apparent contradiction - what is often called

cognitive dissonance. The only way this dissonance will be reduced is by discovering how the two events are actually similar in spite of their apparent dissimilarity. (p. 109.)

Foreman and Kushner also observed that, "once a learning encounter begins, the teacher must closely listen to the wording of a child's questions, and analyze the strategies the child uses to solve a problem. Through their "errors" children tell us what they know" (p. 128-129). Educators must try to look through children's eyes (Castle 1989), to see what they bring to the learning situation, what they do in the learning situation and what meanings they construct from that experience in order to refine teaching methods to meet the needs of the child.

Piaget (1967), Kamii (1982, 1985), Ferreiro and Teberosky (1982), and Holdaway (1979) all found children putting things into relationships in order to make sense of their world. Likewise, Foreman and Hill (1984) found children resolving cognitive dissonance through forming relationships between new events, objects or experiences and ones with which they were more familiar. One such relationship they called correspondence of identity. The young child sees one red ball roll out from under the table and then turns to see a red ball coming from under a different table. After initially turning back and forth the child decides there really are two balls that are alike. The same could be true for seeing two books that are

identical. Another relationship called a correspondence of equivalence, involved two objects or events that were not identical but were similar in many ways. This might be a scaled down model of a play yard made identical to the child's actual play yard. Another example would be the relationship between a big and small book that are identical except for size.

It is with all this in mind that a study of a teaching method and the child in a very specific learning situation was designed. It builds on the work of Ferreiro and Teborosky (1982) regarding the knowledge of print and books that young children bring to school; the ideas of Holdaway (1979) on natural learning; the work of Foreman and Hill (1984) on interpreting cognitive learning encounters with children; a professional goal of tying practice to Piaget's theory; and an interest in big books as a way early childhood educators introduce children to reading.

The Problem

The focus of this study was on the meaning children give to print as a function of experiences with big books. Specifically, the effects of different combinations of book sizes used during read aloud sessions on kindergarten children's construction of knowledge about print were examined.

Background

Reading aloud to young children has been identified as an important variable in their future success at reading both in terms of attitudes and strategies (Durkin, 1966; Holdaway, 1979; Trelease, 1985) as well as having impact on specific concepts about print and vocabulary development (Lamb, 1986; Ribowosky, 1985). Yet the research on the benefits of reading small books aloud to individuals or small groups of children has only begun to be expanded to study the effects of reading big books to larger groups of children (Brown, Cromer & Weinberg, 1986; Montebello Unified School District, 1985).

For this study big books were chosen as a means of looking into how children construct specific knowledge about print. It was recognized that children assimilate environmental and all other forms of print they are exposed to in and out of school and home (Ferreiro & Teborosky, 1982). It has also assumed that no attempt was made to "cause" or "control" the child's construction of knowledge about print. The critical issue was the relationships children made inside their heads as a result of experiencing big books rather than anything about the books themselves.

The use of big books for read-aloud time in early childhood education has risen sharply in the last five years as evidenced by the number of articles published and their increased production by commercial companies. They are

being used primarily during a large group read-aloud session in early childhood classrooms. Children, teachers, student teachers and book companies all offer testimony to their popularity and benefits but very little research is available on their use or benefits to children (Combs, 1987; Brown, Cromer & Weinberg, 1986).

Big books, enlarged texts, and shared book reading (Holdaway, 1979) refer to a specific material as well as to a set of procedures for using them. Although the materials have been around since Scott Foresman enlarged their preprimer in 1957, the procedures which accompany shared book reading can be traced to Don Holdaway in New Zealand around 1979. With an increased awareness of children's ability to come to reading and writing in a more natural way similar to that of listening and speaking (Durkin, 1966), Holdaway sought to recreate the bedtime read-aloud scenario in classrooms for those children who may have lacked these early literacy experiences. To make the print and picture clues more accessible to children both were enlarged several times so that as the teacher read the text, the print-speech connection could be observed by all the children (Holdaway, 1979). The modeling of the teacher's reading strategies and skills as well as reading behaviors (Combs, 1987) has come to be a part of a whole language classroom. Butler and Turbil (1989) outline ten key elements of a whole language classroom. They are:

- 1) reading aloud to children
- 2) shared books (big books)
- 3) Sustained silent reading
- 4) individualized reading
- 5) guided reading
- 6) children's oral language (language experience)
- 7) children writing
- 8) modeling writing
- 9) reading and writing across the curriculum
- 10) shared reading and writing experiences

P. David Pearson (1989) calls for two key words to describe whole language classrooms--"authentic and integrated." Reading and writing should be real, purposeful and authentic to the children while all the while being integrated in their lives, the classroom and throughout the curriculum.

This study did not attempt to implement an entire whole language curriculum but instead chose big books as a concrete example of a material and set of procedures which were designed to facilitate children's literacy behaviors and their concepts about print in particular. This type of research cannot achieve the type of authenticity and integration which would be optimal but seeks information which might allow more classrooms to do so more confidently.

Currently some commercial companies are making big books with enlarged pictures but small print or using stories and illustrations that do not qualify as good

children's literature. Teachers are wondering if big books are the latest gimmick. and administrators are questioning the high cost of purchasing commercial big books if all early childhood educators can say is that children really like them. Without sound research and a theoretical base to guide practice, decision making and curriculum practices will continue to be haphazard, inconsistent (Kamii, 1981) and focused on the method and not on the child (Ferreiro & Teborosky, 1982).

Questions

The overriding questions considered for this study included the following:

Quantitative

1) What impact does the use of big books alone have on kindergarten children's construction of knowledge about print?

2) Is the repeated reading of one size book as effective as the use of two different size books in facilitating children's construction of concepts about print?

3) Does the order that two different size books are read aloud to children make a difference in their construction of concepts about print?

Qualitative

1) What meaning do children ascribe to their exposure to big books? Are they seen as equivalent or identical to the smaller version? Which version do they prefer?

2) What criteria do kindergarten children use to determine which words can be read or not read? Does their criteria change from pretest to post test over a five week period of time? Are there any differences among children in the different treatment groups? (Ferreiro & Teborosky, 1982)

(3) Do children ask as many or more different kinds of questions when big books are used for read-aloud sessions as when small books are used? (Yaden, Smolkin & Conlon, 1989; Manning, Manning & Cody, 1988; Wells, 1986)

Nature of Study

For a more thorough look into the effects of different combinations of book sizes on children's construction of knowledge about print during read-aloud sessions, both a quantitative and qualitative study were conducted. The quantitative results allowed comparison to previous research and the qualitative set a precedent for future research in this area as well as allowing for a more thorough interpretation of the statistical analysis. The two designs are interwoven and will operate simultaneously but for purposes of clarification will be outlined separately.

Selection of Subjects

Kindergarten children who attend classes in the morning in one small town school district in Northeastern Oklahoma comprised the sample. Each of the five intact classes of morning kindergarten children were randomly assigned to a treatment condition. The entire class received the treatment. An equal number of children were chosen from each group. These children's scores on the pre and post test were used for statistical analysis.

Quantitative Design

A between-within two factor mixed design or split plot design (Linton & Gallo, 1975) was chosen. The between portion compared the effect of five different combinations of book sizes used during read-aloud sessions. The within aspect compared children against themselves on the Concepts About Print Test (CAP) (Clay 1972, 1979b).

The five different levels of the independent variable represent combinations of book sizes used for two extra read-aloud sessions per week. These sessions were in addition to those conducted daily by the classroom teacher using small books only for the duration of the experiment. Each session had the children hearing the book twice for a total of four readings each week. The five different groups were:

- 1) big book/big book - big book/big book (BBBB)
- 2) small book/small book - small book/small book (bbbb)
- 3) big book/small book - big book/small book (BbBb)
- 4) small book/big book - small book/big book (bBbB)
- 5) control - no book (0000)

In order to control for teacher differences all of the experimental reading sessions were conducted by the same person. Yet, to minimize artificial conditions the read-aloud was conducted for the whole class, in the children's classrooms with their teacher present.

The dependent variable was the child's performance on Clay's Concept of Print Test (CAP). The pretest used was Sand (Clay, 1972) and the post test used was the alternate form, Stones (Clay, 1979b).

This design involved a pretest, followed by five weeks of experimental intervention, exposing children to five different books. At the end of that time the post test was administered, results tabulated and analyzed using between-within analysis of variance (Linton & Gallo, 1975). The significance level for the study was set at .05.

Qualitative Design

This component looked at what meaning children ascribe to their experience with big books in read-aloud sessions and how this affects their construction of knowledge about print. In order to build on the work of Ferreiro and Teborosky (1982) an adaptation of one of their assessments

was carried out with the entire sample from the quantitative study. Following the one-one-one administration of the Sand (Clay, 1972) pretest and again with the Stones (Clay, 1979b) post test, the child was asked to sort a deck of twenty cards, on which characters forming words and non-words had been written, into piles of things someone could read or things which someone could not read. Children were then asked to tell why they made the choices they did. Of interest was whether American children used similar criteria as children in Argentina and if that criteria changed over the course of the study or as a function of the experimental group they were in.

In addition a random sample of five children were chosen from each of the five groups of the study. These twenty-five children were interviewed following the five week experimental condition and post test as to their preference of book sizes if more than two were being used and their perceptions of similarities or differences between the books. Children's comments were recorded for further analysis to ascertain whether children see the different forms of books as equivalent or identical (Foreman & Hill, 1986).

The interviews were an adaptation of Piaget's clinical interview (1965) wherein set questions were asked but follow up questions could occur to pursue an individual child's thought processes and the meaning they were ascribing to the different size books.

In order to better observe the behavior of the children and the reader, the read-aloud sessions were videotaped. Through analysis of the videotapes the number and content of questions children asked during the read-alouds were recorded for comparison to the findings of Yaden, Smolkin and Conlon (1989) and Wells (1986) who found children's natural home read-aloud sessions, which big books were designed to emulate, were characterized by frequent questions and responses.

The body of qualitative data was gathered to answer questions specific to that component of the study but also to collaborate, interpret or contrast the findings achieved with the quantitative study.

Statement of Hypotheses

Based on Piaget (1974, 1967), Ferreiro and Teberosky (1982), Kamii (1985) and Foreman and Hill (1984) the hypothesis for the outcome of the four different combinations of big and small books would be as follows:

- 1) Based on the fact the child would have heard the story the first time through and, by being aurally familiar, more able to focus on the print (Holdaway, 1979) allowing formation of correspondences of identity for the print and equivalence for the books (Foreman and Hill, 1984) during the second reading, one would expect that the small book followed by the big book (bBbB) would result in the child's

construction of the highest level of print relationships on both the quantitative and qualitative parts of the study.

2) The big book followed by the small book (BbBb) would still allow the child to construct correspondences of equivalence between the two books but since the print would be less visible on the second reading this condition would result in slightly fewer print relationships than the first condition but more than the two remaining.

3) The big book followed by the big book (BBBB) would allow for a correspondence of identity and increased visual exposure to print as well as greater print-speech associations (Holdaway, 1979) and so would help children construct relationships of print more than the small book alone but less than either of the combinations of big and small books together.

4) The last condition of small book followed by small book (bbbb) will serve as a control for what traditionally occurs in early childhood classrooms. the reading of good children's literature aloud is beneficial to children (Trelease, 1985) and will facilitate formation of concepts about print and allow children to form correspondences of identity as the same size is read twice. Yet this condition would be expected to result in less construction of relationships about print.

5) The control group (0000) having no extra read-aloud sessions will serve as control for both the qualitative and quantitative study. By comparing (bbbb) read by someone

other than the teacher to (0000) where all read-alouds will be by the teacher only the effect of the obtrusive procedures will be revealed. This would be expected to show gains from pretest to post test but at a lower level than any of the treatment conditions.

Significance of the Study

The importance of this study was based on the need for greater insight into how children construct knowledge in general (Piaget 1967; Kamii, 1981) as well as specific knowledge about how children construct concepts of print (Ferreiro & Teberosky, 1982). The present study added to the body of research studies by providing quantitative and qualitative data on the use of big books with young children. Based on quantitative data on whether size or the order in which different sizes are presented affects kindergarten children's construction of knowledge about print, this study made recommendations regarding the more effective use of big books with kindergarten children. In general the study helped tie early childhood practice and methods to a theory of how children construct knowledge (Piaget, 1967; Kamii, 1981).

The results will be used with early childhood, elementary and reading in-service and pre-service teachers to help them view children as actively constructing knowledge as well as provide recommendations for the use of big books. The implications could provide recommendations

for practice to parents, day care providers, school librarians and administrators as well as the growing number of early childhood researchers. This study hopefully provided some information which can be used by commercial companies producing big books as to their use and effects on children alone and in conjunction with the smaller version of the same book.

Assumptions

1. Children construct their own knowledge from within, slowly over time (Piaget, 1967; Ferreiro & Teberosky, 1982; Kamii, 1985; Holdaway, 1979).
2. "Concepts about print" is a complex scheme (Piaget, 1967) but a specific example of how children construct knowledge in general (Ferreiro & Teberosky, 1982).
3. Repeated read-aloud of any size book increases children's comprehension, appreciation and attitudes toward reading (Brown, Cromer & Weinberg, 1986; Beaver, 1982; Holdaway, 1979; Trelease, 1985).
4. A method or material in and of itself does not control learning, but may facilitate or block children's own construction of knowledge (Ferreiro & Teberosky, 1982).

Definition of Terms

1. Big books: Commercial made renditions with enlarged text and pictures of a smaller version of an

authored work of children's literature. All big books had from 24 to 32 pages and be 17" x 16" or 14" x 21" in size.

2. Read-aloud session: 15-20 minute time when children sat together on the floor within 4-5 feet of the book and person reading. A whole class was read to at one time. The reader encouraged children's participation and questions while modeling reading strategies.

3. Concepts about print: Two alternate forms (Sand and Stones) of a test of children's concepts about print (Marie Clay, 1979a). The researcher asks questions and observes a child's behavior regarding:

- 1) book orientation
- 2) whether print or pictures carry the message
- 3) directionality of lines of print, page sequences and directionality of words
- 4) the relationship between written and oral language
- 5) knowledge of words, letters, capitals, space and punctuation (Goodman, 1981)

4. Interview: A relaxed dialogue with one child in which preferences for books and constructed differences or similarities were assessed. A set of questions were used but additional questions were added when appropriate to probe the child's line of reasoning. This clinical method interview followed the techniques of Piaget (1967). Kamii (1985) and Ferreiro & Teberosky (1982).

5. Combinations of book size: The sequence in which four separate readings of the same story were read aloud to the children in a week's time. This will vary from reading the same size book (BBBB and bbbb) to reading different size books alternately (BbBb and bBbB).

6. Constructivist education: Based on Piaget's theory that explains learning as a process of construction from within the individual rather than one of internalization or absorption from the environment. Key elements include:

- 1) Children are not passive vessels that stay empty until knowledge is poured into them.
- 2) Children construct knowledge by putting things into relationships.
- 3) Knowledge is constructed as an interrelated whole rather than a collection of bits from the outside (Kamii, 1982, p. 2-3).

7. Children: First semester kindergarten children in half-day sessions at one public school in Northeastern Oklahoma.

8. Preference: Asking the child which version of the book he likes the most or would like to have read to him again.

9. Differences in books: The child's ability to verbalize or point to how the books are different. Of interest was whether the child identifies size as the only difference or perceives the story, print or pictures as different.

10. Similarities: The child's ability to verbalize or point to things which are the same about the two books. Of interest was whether the child recognizes the book, story, pictures and print are similar or different because of size.

11. Correspondences of identity: The child verbalizing the books as the same when presented with two copies of the same size. Of interest was what the child looks at or points to in order to confirm his hypothesis of identity.

12. Correspondence of equivalence: The child's ability to see similarities and differences when presented with two books in different sizes. Of interest was what the child looks at, talks about or points to in confirming or justifying his position of how the books are similar or different.

Scope and Limitations

One of the limitations of this study was that it focuses on one school district's population of morning kindergarten children making generalizations to all kindergarten children in other geographic areas more difficult. A larger sample spanning both morning and afternoon would increase external validity.

Difficulties with the study include possible lack of sensitivity of the Sand (Clay 1972) pretest and Stones (Clay, 1979b) post test to detect changes in children's concepts about print. It was hoped that by comparing children to themselves this weakness can be minimized. No

differences may be found which could mean that children's concepts of print take longer to change (the study did not run long enough) or that the instrument did not measure the changes which did take place. It was hoped that the gathering of ongoing qualitative information would provide insight into the quantitative findings.

This study did not try to focus on teacher-made or teacher and child-made big books even though that is suspicioned as a very powerful way to involve children with print. It was recognized that literacy develops as a combination of the printed and written word and that in many ways children's concepts about writing may develop earlier (Ferreiro & Teberosky 1982) than their concepts about print. But for this study concepts about print will be measured in isolation although the researcher recognizes this is not as it occurs naturally in children.

Overview of Dissertation

In Chapter II - Review of Literature the following topics have been identified for review

- 1) Constructivist Theory
- 2) Concepts About Print
- 3) Big Books
- 4) Background for study (including Reading Aloud and Whole Language)
- 5) Methodology and Design

For each of these areas a summary is presented as well as how the specific area impacts the overall study. Current articles, reports of research, unpublished dissertations, books of the last ten years as well as classic studies were described to provide a mix of old and new information that impacts this particular study.

In Chapter III - Methodology, the specific procedures and experimental design will be outlined and discussed in detail. Chapter IV - Results, will present the findings of the study and analyze the quantitative and qualitative data. Chapter V - Summary, Conclusions and Recommendations, will provide closure to the project with a self evaluation and implications for further research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The Review of Literature has been organized according to the key areas which have been identified as impacting the current study. They are:

- I) Constructivist Theory
- II) Concepts About Print
- III) Big Books
- IV) Additional Background for Study (Reading Aloud, Whole Language)
- V) Methodology and Design

For each of these areas research, articles, books and published dissertations have been identified for review. The purpose of this section is to present the key aspects of each separate area and show how the areas impact each other as well as provide the foundations for this particular study.

Constructivist Theory

Piaget, in his search for a biological basis to knowledge, studied young children and found them

constructing their own knowledge from within (1967, 1974). Piaget then studied specific aspects of children's knowledge construction to see if their development remained individually unique and yet sequentially predictable (1965, 1967). In each study Piaget looked at the situation from the child's point of view and with his clinical method interview probed a child's thinking and reasoning as he sought to understand the child's logic.

Continuing Piaget's work, Kamii (1982, 1985, 1989) has carried it further to look at how public school teachers can facilitate children's construction of number concepts in first and second grade. Again, like Piaget, Kamii first observed children closely, interviewed them, experimented with different teaching activities, observed and interviewed children some more. She found children proposing their own hypotheses and making their own meanings out of every day events and even the inappropriate school tasks they were sometimes asked to do.

Piaget (1965) described three different types of knowledge which differed by their source and function. Physical knowledge is derived from the world through our senses, social knowledge is arbitrary and acquired from other people and the culture in general. The third is logico-mathematical and is constructed within each individual by forming relationships and developing concepts. Kamii cautions that most of our curriculum passes on social knowledge but offers few opportunities for children to

gather their own physical knowledge and even less encouragement for children to construct their own logical-mathematical knowledge (Kamii, 1990).

Ferreiro and Teberosky (1982) continued the tradition of looking from a child's perspective as they studied the entrance to literacy of young children in Argentina. They too found children far from haphazard or oblivious to the print around them but rather actively constructing meaning in a systematic way from the world in which they lived.

Lev Vygotsky, a Russian contemporary of Piaget credits him with.

...the clinical method for exploring children's ideas...He was the first to investigate children's perception and logic systematically; moreover he brought to his subject a fresh approach of universal amplitude and boldness. (1986, p. 12)

Vygotsky comes to different conclusions than Piaget on whether children's speech is first egocentric (Piaget) or first social (Vygotsky). Vygotsky felt that language was not merely a reflection of inner thought but played an important role in forming a child's speaking. Both observed children's egocentric speech but disagreed on the next phase. Piaget felt egocentric speech gave way to social speech while Vygotsky saw it become inner speech and so never really disappeared (1986). Vygotsky investigated the social context of learning in more depth than did Piaget and felt its influence critical on the learning of the child.

Piaget did recognize the importance of "mutual respect" (1965) in relationships as it affects not only moral autonomy but in all other aspects of cognitive development. Piaget himself admits that the affective level "doesn't interest me as a scientific inquiry" (Bringuier, p. 49). But he goes on to say, "the impetus for everything lies in interest, affective motivation" (Bringuier, p. 50).

Vygotsky felt the two systems were impossible to separate and describes "the existence of a dynamic system of meaning in which the affective and intellectual unite. It shows that every idea contains a transmitted affective attitude toward a bit of reality to which it refers" (1986, p. 10).

Vygotsky agreed with the idea of children constructing their own knowledge but did not view concepts gained from others as any less valuable than those constructed from within. Vygotsky felt that adults could model behaviors and provide increasingly more responsibility to the child, provide the child opportunities to carry out the activity with other children and finally to attempt the activity alone. He said, "what a child can do in cooperation today, he can do alone tomorrow" (1962, p. 101).

Holdaway's (1979) "shared reading" procedure would follow Vygotsky's steps of having someone with whom the child is closely associated model the reading behaviors repeatedly, allow children to participate in nonthreatening ways, provide them opportunities to share the book with each

other and all before the child could or would be asked to perform on his own (Weaver, 1988). Vygotsky would emphasize the social and affective context of learning at the same time Piaget would emphasize the individual's construction of knowledge as a function of the physical and social knowledge provided, the warm, supportive environment and the opportunity to exchange points of view. Vygotsky sees it as "the true direction of the development of thinking is not from the individual to the social but from the social to the individual" (1986, p. 36).

Noam Chomsky, a linguist, wrote about a transformational grammar common to all speakers. He disagreed with Piaget and Vygotsky on some aspects but felt "the environment has no structure that is directly assimilable by the organism. Order is imposed upon the perceptual world not derived from it" in Piatelli-Palmarini (1980, p. 10). Chomsky differed from Piaget in that Piaget saw language as a reflection of mental symbolic representation and Chomsky saw language as more innate, playing an important role in the formation of symbolic thinking. In this respect he came closer to Vygotsky's view of language. Together they disagreed with the behaviorists who viewed the learner as passively absorbing the language from the world around them (Piatelli-Palmarini, 1980).

Unfortunately, our education practices, materials, and approach to research still reflect a passive absorption of knowledge paradigm. Elkind (1989) describes it as "the

'psychometric' educational philosophy that now dictates educational practice in the majority of our public schools" (p. 113). But many research findings indicate otherwise (Kamii, 1989, 1990; Ferreiro and Teberosky, 1982). The view of passive learning is too narrow and does not acknowledge the larger context or the active role children play in the construction of their own knowledge. The education process must be viewed from the child's perspective as well as that of the teacher (Castle, 1989). We must look to how children learn to find the best ways to teach.

Elkind (1989) and Kamii (1984, 1985, 1990) call for a "paradigm shift" as described by Kuhn (1970). The gravitational pull or negative drive of higher standardized test scores with the focus on the "what" of children's learning will have to dissipate before the focus can be shifted to the "how" and "why" of children's learning.

This study reflects the process of shifting paradigms. The quantitative component is couched in a paradigm which endorses experimental design where variables can be controlled, while the qualitative component is part of another which results in a more ethnographic approach to research. It reflects an attitude of "I can find out" and looks to "the child as informant" (Harste, Woodward and Burke, 1984, p. 222-223).

Shifting paradigms occur by entire professions but more realistically by one professional at a time, one study at a time. Otto Van Neurath's famous simile describes it best,

Scientists are like sailors who have to rebuild their ships at high sea, without being able to seek port. Each plank in the hull may be jettisoned in the process, but it is not feasible to jettison all of the planks at the same time" (as quoted by Skagestad, 1981, p. 19 in Harste, Woodward and Burke, 1989, p. 50).

The quantitative component of this study was included to allow comparison to previous research. It reflects more traditional practices and may soon be "jettisoned" but allows continuity, while the qualitative component can be put into place both for the individual researcher and the profession at large.

Concepts About Print

Known by many different labels, children's knowledge of the components of reading and writing has long been a topic of interest. Since Durkin's study in 1966 found young children entering preschool and kindergarten already reading in an informal way, more emphasis has been placed on children's natural acquisition of literacy as opposed to formal reading instruction.

Defined as "print awareness" by Weaver and Shonkoff (1979) it included:

knowing what reading is: knowing conventions of print such as reading left to right, top to

bottom. one line at a time: and knowing the concepts of a letter. word. sentence or story.

From a constructivist point of view. "print awareness" would come under the category of social knowledge about reading as opposed to logico-mathematical knowledge in which the child constructs relationships with former knowledge and meaning or concepts are created. "For modern psycholinguists. the objective in reading is the construction of meaning from print, in context" (Kamii. 1989. p. 29). Waterland (1985) states. "reading is not a series of small skills fluently used: it is a process of getting meaning and must be so from the start" (p. 11). This study differs from others in that it attempted to look at not only a child's social knowledge regarding concepts about print. through the use of Clay's Concepts About Print Test: provided opportunities for children to gather their own physical knowledge of print through big books: but also encouraged children's construction of logico-mathematical knowledge by providing opportunities to form relationships between different size books.

Researchers have looked at the small components such as a child's knowledge of letter, word or sentence. A wide variety of methods have been used. Brown (1984) in his review of literature concluded that whether asked to cut a word off a sentence strip with scissors (Metizer and Herse. 1969: cited in Brown 1984). say long and short words (Papandropoulou and Sinclair. 1974: cited in Brown 1984). or

recognize the number of verbal words in a spoken sentence (Karpova, 1966: cited in Brown, 1984) children have difficulty isolating a word from letters or from a sentence.

Even though children might not have been able to recognize or define social conventions of print they had already begun the process of constructing meaning from print (Kontos, 1986). Ylisto (1967) presented children with twenty-five printed word symbols derived from the natural environment such as road signs, household and food products. It was found that even before they could be read consistently children were attaching meaning to the symbols. Since then other studies have collaborated Ylisto's (1967) findings that children's print awareness and meaningful use of print begins long before formal schooling and is greater for environmental print than for book text (Goodman and Altwerger, 1981; Doake, 1979 cited in Brown, 1984).

Ferreiro and Teberosky investigated young children's print knowledge in Literacy Before Schooling (1982). One of their studies with four-year-old lower-income children from Argentina consisted of showing them twenty printed cards each with a word or nonword collection of symbols. The children were asked if each is something to be read or not and how the child could tell. Rather than being interested in whether the child could tell if it was a "word" they were looking at the child's system for determining which print might be meaningful. Ferreiro and Teberosky (1982) found children used primarily a minimum number of letters or

characters and a minimal amount of character diversity to decide if items could or could not be read.

Previous researchers focused on the social knowledge surrounding print, but fewer have looked at the child's system or logico-mathematical knowledge framework (Kamii, 1989) which enables relationships to be formed and meaning to be constructed. Ferreiro and Teberosky (1982) built on the work of Ylisto (1967) and Papandropoulou and Sinclair (1974) regarding children's awareness of print as well as their own interest in Piaget's theory of how children construct their own knowledge to provide insight into both topics.

Marie Clay has been most closely associated with the term concepts about print and has researched and published in this area (1966, 1977, 1979a). She devised two forms of the same assessment, Sand (1972) and Stones (1979b), which consists of a child size book which the researcher reads to the child while asking the child questions. The Concepts About Print (CAP) test has been used in research to assess preschool (Lamb, 1986), kindergarten (Brown, 1984; Rogers, 1987; Day and Day, 1978a, 1978b) as well as first grade (Johns, 1980; Lomax and McGee, 1987) children's concepts about print.

P. David Pearson (1984) describes Clay's CAP test as construct referenced that is composed of clearly defined early reading tasks that are directly interpretable in terms of instruction. He goes on to say:

the test represents a shift from an attempt to assess relatively fixed "abilities" or "traits" (psychometric approach) to an attempt to assess a state of knowledge (edumetric approach), particularly as reflected by the specificity of the domain of items. (p. 166)

Tests of reliability and concurrent validity have been done between Sand (Clay, 1972) and the Metropolitan Readiness Test and the Record of Oral Language. Correlations were as high as .87 (Day and Day, 1978a, Rogers, 1987) with the Metropolitan Reading Test.

The Sand (1972) and Stones (1979b) became part of Clay's diagnostic survey and was used to help recover older readers who were having difficulty or to predict which early readers might go awry (Pumfrey, 1985). The studies mentioned above, however, used one or both forms of CAP without using the entire diagnostic survey.

Although welcomed as a more informal assessment of early reading behaviors, Clay's CAP has had its critics. Goodman (1981) cautioned against its interpretation and expressed concern over the lack of dealing with the story as a whole or discussing any meaning the child may or may not have constructed from the experience. Johns (1980) after his study using Sand (1972) with sixty first graders grouped by reading ability, warned "It should also be reiterated that a number of tasks may not have been clearly understood, especially by below average readers," he continued with

concern over the lack of items measuring knowledge of sentence, paragraph or story. He concluded, "there is not sufficient evidence of its validity and reliability to warrant widespread use of the Sand by school systems" (p. 546). However, since then it has been used effectively in studies (Lamb, 1986; Brown, 1984; Rogers, 1987) and so was chosen to allow comparison.

Lomax and McGee (1987) used Clay's Stones (1979b) as one of eighteen assessments given to 81 children from three to seven years of age. Ten items of the twenty-four item assessment were used (those which assess book orientation and print-direction concepts) as one of the five assessments used to measure children's concepts about print. Three assessments were used to measure graphic awareness, three tasks were used to find phonic awareness, three assessments were used to detect children's grapheme--phoneme correspondence knowledge, and four more tasks were used to gauge children's word reading ability. Lomax and McGee concluded that "every child in the study, even the youngest, displayed a great deal of awareness of written language and reading" (p. 251). Their findings supported one developmental sequence suggested by Ferreiro and Teborosky (1982) which said that children first differentiate between print and pictures but predict text from pictures. Then they attend to salient graphics of text and explore several hypotheses regarding the relation between print, speech, and

meaning. Finally they "search for a one to one correspondence between graphic and sound elements" (p. 65).

Lomax and McGee further concluded that "developing an understanding of the underlying relationships between written text, oral text, and meaning (a dimension of concepts about print) seems to be an important precursor to the development of knowledge about letter-sound relationships. It suggests that supporting children in their discovery of concepts about print is important not only early in their literacy acquisition but also throughout literacy learning . . ." (p. 253).

Brown (1984) found significant sex differences in performance on Clay's CAP but had not controlled or reported income level. Only twenty-one of the eighty-five children were minority children. When Johns (1980) conducted his study no significant differences on the basis of sex or an interaction of sex of subject and type of reader (above-average, average, below average) were found on Clay's Concept About Print Tests (1972, 1979b). However, Johns' sample was from predominantly middle to upper income, non-minority families.

Lomax and McGee (1987) worked with eighty-one children from three to seven but does not report the differences by sex within age groups or overall. The children in the Lomax and McGee study attended a private nursery/elementary school and were from "middle-income homes where one or both parents are professionals" (p. 242). All studies which looked at

age (Brown, 1984; Johns 1980; Lomax and McGee, 1987) have found that chronological age is a significant factor with older children scoring higher than younger. Day and Day (1978a) in their use of CAP with kindergarten children found no significant difference due to sex but socioeconomic status or minority information was not given.

It is acknowledged that Clay's Concepts About Print Test (1972, 1979b) is not a complete picture of what goes on in the reading process but was chosen for this study to 1) compare and contrast children's performance with other studies (Brown, 1984; Lamb, 1986). 2) provide a measure of social knowledge and 3) to contrast to measures such as Ferreiro and Teberosky's (1982) card task and the interviews with children which do more closely assess children's meaning-making strategies or logico-mathematical knowledge.

Big Books

Big books have been around since at least the 1950's when Scott Foresman provided enlarged versions of the preprimer for use with their reading series. Entitled Our Big Book it was part of the "We Look and See" series. It was promoted with this description.

Its large clear type and pictures are designed for use in the area of far vision: it thus provides an important safeguard against undue eye fatigue for the beginning reader.

More detailed suggestions for uses of Our Big Book were given in the Guidebook a part of the Teacher's Edition of the "We Look and see" Basic Pre-Primer (1951).

However, it was not until 1979 when Don Holdaway in New Zealand included teacher made, enlarged versions of children's favorite authentic literature in his naturalistic reading program that their popularity in public school grew. Big books were seen as a way of sharing with a large group of children the phenomena of the bedtime story or lap-reading experience with children's literature that was found to have been experienced by so many early readers at home (Durkin, 1966).

Holdaway (1979) recognized that the intimate, warm social-emotional environment in which young children experienced reading at home had an important impact on their attitudes toward reading and books in general. In an effort to recreate some of the warm, social-emotional atmosphere, allow visual exposure to print, and facilitate the print-speech association, Holdaway enlarged the print as well as the pictures in his renditions of children's favorite literature selections. He described the phenomena as "shared-book reading", introduced modeling of the reading process and strategies by the teacher as well as provided for participation by the children (1981). The group use of big books was followed by individual access to small books, repeated readings and follow-up extension activities.

New Zealand has the highest literacy rate of any nation in the world and educators took notice (Anderson, Herbert, Scott & Wilkinson, 1985). Big books range from enlarged basal stories to strictly teacher or child made renditions of favorite pieces of children's literature in New Zealand and to commercial products of authentic children's literature of varying quality available on several continents.

How they are used varies even more. They have been seen as a way to bring good children's literature to a group of young children (Cullinan, 1987) or as a creative writing follow-up activity to channel children's responses to a book (Combs, 1984). They are used as a supplement to traditional instruction with predictable materials (Heald-Taylor, 1987), advocated as a whole language reading program (Hornsby, Sukarna and Parry, 1986; Slaughter, 1983; Whyte, 1988) or seen as a way to teach vocabulary and phonics (Johnson & Louis, 1987). They have been discussed in terms of how they recreate a natural learning environment similar to home (Holdaway, 1979; Anderson, 1987; Tovey, Johnson and Szporer, 1988) and how reading skills and strategies can be modeled for children at school by the teacher (Combs, 1987; Strickland, 1990). By taking place in a group setting, nonreaders get to see and hear what fellow readers do as they actively go through the text together (Cassady, 1988; Trachtenburg & Ferruggia, 1989; Strickland, 1990). Other articles deal with how to make or how to use big books with

children as a novelty, supplement or delivery system for reading skills, strategies and children's literature (Piiro & Piiro 1988; Barret, 1982; Yellin, 1989; Park, 1982). Yet, few have conducted quantitative research on big books (Combs, 1987; Brown, Cromer & Weinberg, 1986; Montebello Unified schools, 1985; Ribowsky, 1985) and no one in the present survey of the literature has looked at or discussed what goes on in the use of big books with children from a constructivist standpoint although Harris (1986) did use big books as one part of an ethnological study. Big books are discussed in light of other theories of reading (Trachtenburg & Ferruggia, 1989) or in comparison to reading which occurs without formal instruction (Heald-Taylor, 1987) but not in respect to a broader perspective of how children construct their own knowledge.

Research on big books has found school children improving on standardized tests as a result of a repeated readings program of which big books were a part (Brown, Cromer & Weinberg, 1986). Improved ratings by teachers and observation of student behavior showed favorable results when teacher and parent-made big books were used in conjunction with multiple copies of small books as part of a systematic reading program in California (Montebello Unified School District, 1985). Combs (1987) found significant differences in comprehension between those children who were read a small book in a traditional way and those who were read an enlarged text while the teacher modeled reading

strategies. Also found were increases in attentiveness and children's ability to justify their answers to questions through use of the text. Anderson (1987) looked at whether the use of big books actually recreated a naturalistic reading atmosphere similar to lap reading in the home. Sharon Harris (1986) did use big books as one part of a literacy rich environment in order to look at how children actually process the experience of seeing, hearing and interacting with literacy events and how the meaning they ascribe to that event gets incorporated into their construction of concepts about print.

Harris observed six children in a Headstart preschool situation over a five month period. Videotapes were made of the children daily as they engaged in literacy events as defined by Anderson. Teale and Estrada (1980: cited in Harris, 1986). Teacher observation as well as the videotapes were combined with data gathered before and after three literacy tasks. One of these was a bookhandling task developed by Goodman and Altwerger (1981) from an adaption of Clay's Concepts About Print Tests (1979b) Harris notes. "Teacher-made big books intrigued many of these children, especially when they compared the small book version with the enlarged text version" (p. 339). Harris found that "all demonstrated a greater knowledge of the forms and functions of print at the end of the study. The strongest evidence for this growth comes more from the observational data than from the three literacy tasks" (p. 343).

By comparing quantitative measures on the Concepts About Print Test (Clay, 1972 1979b) to videotaped observations and interviews with children the current study attempts to look at not only the "what" or social knowledge young children have but to extend the insight into the "how" and "why". Of interest is the meaning children ascribe to their experiences with big and small books as well as how this impacts their construction of other concepts regarding books, print and stories.

Additional Background for Study

Background for this investigation has led into how children learn to read naturally at home (Durkin, 1974; Butler & Clay, 1979; Martin & Brogan, 1972; Mason, 1985) and the importance of reading aloud to children (Barrett, 1982; Holdaway & Handy, 1980; Trelease, 1985). Also looked at were children's early reading behaviors (Teale, 1984; Sulzby, 1985; Templeton and Spivey, 1980; Yaden and Templeton, 1987; Clay, 1977; Crowell, Kawakami, Wong, 1986) and the nature of formal reading instruction (Anderson, Hiebert, Scott & Wilkinson, 1985; Roberts, 1984; Pellegrini, 1980).

Denny Taylor (1983) followed six children for three years in and around New York City as they went from non-readers or writers to proficient readers and writers. Her field study looked at family backgrounds, attitudes, and reading behaviors in an attempt to identify how family

literacy influences a child's development of literacy. This longitudinal study used a wide angle lens to view each of the six children. Isolated experiences were looked at only as part of the overall picture.

Gordon Wells (1986) studied thirty-two children from after their first birthday until the last year of their primary schooling in Bristol, England. His efforts were aimed at understanding the child's language development, how it occurs naturally and how it is formally instructed in school. He sought answers to how children construct meaning and knowledge by way of language. He found

It is not simply that, as has already been stressed, children bring different aptitudes and experiences to each learning task - important though it is to recognize this diversity - but that the learning itself involves an active reconstruction of the knowledge or skill that is presented, on the basis of the learner's existing internal model of the world. The process is therefore essentially interactional in nature, both with the learner and between the learner and the teacher, and calls for the negotiation of meaning, not its unidirectional transmission (p. 118).

Wells (1986) speculates that reading aloud may benefit children's questioning and thus comprehension skills more than it builds children's awareness of print conventions. This seems substantiated by findings of Yaden, Smolkin and Conlon (1989) who found 3-5 year-old children's questions

focusing more on pictures, story and word meaning and less on graphic form. This may be due to the age of the child. At an early age they may construct knowledge about pictures, story and word which then enables them to focus in on specific aspects of graphic form once they are older and more formal instruction in reading is initiated. Yaden, Smolkin and Conlon (1989) recognized that,

it may be that the child's own contribution to the process - via frequent questions and comments during reading - is a more useful index of the rate and content of the child's acquisition of literary knowledge (p. 190-191).

This position is contrary to that of Goodman (1986), Smith (1978) and Clay (1979a) who suggest that through reading aloud concepts about print and letter-sound correspondences are developed.

Holdaway (1979) designed big books to help recreate the warm, supportive parent-child reading environment within a classroom between teacher and students. It is documented (Durkin, 1966; Wells, 1986; Yaden, Smolkin and Conlon, 1989) that children ask many questions regarding print, illustrations and book conventions during read-aloud sessions at home when parents are responsive and patient. If big books do resemble home reading, then it should follow that if teachers are patient and responsive during the reading of big books in a classroom, students should ask more questions than when read a small book. This study

combined the use of a concepts about print assessment with a recording of children's questioning behavior and information gathered from interviews to provide information pertinent to the current read-aloud controversy.

The latest movement in reading has pulled theories from many different disciplines. A whole language approach to reading describes reading as an active transaction between the reader and the print (Rosenblatt, 1983: cited in Parker and Davis, 1983; Goodman, 1986; Weaver, 1988; Taylor, 1989; Blazer, 1989). This closely parallels Piaget's description of children's construction of knowledge in other areas (1967). This approach is more than a method or material but a new way of viewing the child and especially the social-emotional context in which reading occurs (Waterland, 1985; Weaver, 1988). Whole language attempts to recreate a natural learning environment and so has absorbed the use of big books and Holdaway's (1979) shared-book method. Ribowosky (1985) contrasted whole language to code emphasis and found greater increases from pretest to post test on the Test of Language Development, Book Handling Knowledge Task and Metropolitan Achievement Test following a year long program for kindergarten girls. Other major contributors to the whole language approach include Smith (1978) and Goodman (1986) and Goodman and Goodman (1979). The approach integrates reading and writing (Manning, Manning & Long, 1988) and helps children to become literate while enjoying the process (Long, Manning & Manning, 1987). The whole

language paradigm is one of the backdrops (Altwerger, Edelsky & Flores, 1987) for the current study. It will not be thoroughly examined but cannot be ignored since it has made possible the bridge between constructivism and reading.

Constance Weaver (1988) and others (Rosenblatt, 1983: cited in Parker and Davis, 1983; Goodman, 1986) have begun to describe reading as the construction of knowledge through transactions with print but not in connection with Piagetian theory. Harste, Woodward and Burke write,

A transactional view of language learning assumes that meaning resides neither in the environment not totally in the head of the language learner, but rather is the result of ongoing sign interpretation. Language is seen as open, and meaning is seen as triadic, the result of a mental setting actively attempting to make sense of a print setting (1984, p. 57).

Methodology and Design

Qualitative

Since this study is a combination of quantitative and qualitative methods in an attempt to bridge to past research and set precedent for future research both aspects of research have been investigated in creating this study.

Taylor (1983) and Wells (1986) have done extensive qualitative case studies into how children learn to read, write and talk. These studies follow some of the guidelines

set down by Agar (1986). Kirk and Miller (1986) and Fine and Sandstrom (1988) as well as Leichter and Mitchell (1978). Harris (1986) uses a combination of observation, videotaping and literacy tasks to observe preschool children's involvement with literacy events and their development of literacy knowledge. Anderson (1987) observed two first grade teachers use a big book using a two day a week ethnological approach.

This present study pulled elements from the above studies as well as techniques developed by Piaget (1965), Kamii (1985), Foreman and Hill (1984), and Ferreiro and Teborosky (1982) to refine the qualitative aspects of the design and interview sessions.

To look at how children ascribe meaning to events, objects or actions Foreman and Hill (1984) have interpreted Piaget's theories of how children construct knowledge into a series of activities for very young children. These activities were not aimed at reading or concepts of print. But if concepts of print are looked at as only a more complex example of how children construct knowledge in general then Foreman and Hills' recommendations can be extended up the age span and over to apply to this current study.

Foreman and Hill (1984) identified four general types of learning encounters. They are:

- 1) establishing identity and equivalence
- 2) changing perspective

- 3) representing motion
- 4) making functional relations. (Foreman & Hill, 1984, p. 5)

They identify the first encounter as a matter of correspondence. In identity the child asks, "Is this the same one I had before?" It involves a correspondence between two sightings of the same object. In equivalence the child asks, "Is this one similar to or different from another one?" Equivalence involves a correspondence between two or more objects (Foreman & Hill, 1984, p. 4).

Because of the demands on representational thinking, encounters that deal with equivalencies are generally more difficult than those dealing with identities. This is true only because the physical difference between two objects can be greater than the physical difference between two sightings of the same object. Therefore, the mental effort to establish a correspondence between two different objects is greater than the effort to establish a correspondence between the same object on two different occasions (Foreman & Hill, 1984, p. 8).

In the current study children will be shown identical books as well as a variety of sizes of equivalent books in order to gather information regarding their observations and conclusions.

Quantitative

A between-within two factor mixed design or split-plot design was chosen for the quantitative study (Linton & Gallo, 1975, Keppel, 1982). This design allows the comparison of five different combinations of book size that will be used during 15-20 minute read-aloud sessions twice a week as well as allowing for subjects to be compared to themselves on the pretest and post test of Clay's (1979b) Concepts About Print (CAP) test. The split plot design allows comparison of results to other studies which have used CAP to look at the effects of read-aloud sessions with small books only. Lamb (1986) found a statistically significant effect on the CAP after reading aloud small books to minority children aged three to five in a day care setting daily for ten weeks. Other studies have used the CAP with ANOVA to look at its relationship to other measures (Brown, 1984; Day and Day, 1978a) or to assess the levels of print concepts in different reading ability first graders (John, 1980; Lomax & McGee, 1987).

By contrasting the results of the quantitative design to that of the qualitative component a more global view of children's social, physical and logico-mathematical knowledge can be acquired (Kamii, 1990).

CHAPTER III

METHODOLOGY

Introduction

Chapter Three presents the methods and procedures for this study. This study combined two different types of research design. In order to assess social knowledge regarding print and to make comparisons to past research (Brown, 1984; Lamb, 1986; Rogers, 1987) a quantitative component was designed. Due to the nature of how children construct their own logico-mathematical knowledge in an active ongoing fashion a qualitative component was essential. Although conducted simultaneously, for purposes of clarification the two designs will be explained separately.

For the purpose of presentation the chapter has been divided into four major separate sections.

- I. Quantitative study
 - A. Design
 - B. Questions and hypothesis
 - C. Population
 1. Selection of sample
 2. Description of sample

- D. Instrumentation
- E. Procedures
- II. Qualitative study
 - A. Design
 - B. Questions and hypotheses
 - C. Selection of sample
 - D. Instrumentation and Procedures
 - 1. Card sorting task
 - 2. Final interviews
 - 3. Videotaping
- III. Overall Threats to Validity
 - A. Internal
 - B. External
- IV. Summary

Quantitative Study

Design

A between-within two factor mixed design or split-plot design was chosen for this study (Linton & Gallo, 1975, p. 224). Groups were assigned to treatment or control conditions and students were randomly selected for assessment. The assumptions for the use of analysis of variance (ANOVA) were studied and met. Despite concerns over the sensitivity of the Concepts About Print (CAP) test (Clay, 1972, 1979b; Goodman, 1981) other studies have used CAP with ANOVA (Brown, 1984; Johns, 1980) and with analysis

of covariance (Rogers, 1987; Lamb, 1986). Since some degree of randomization was possible to satisfy the other assumptions of normal distribution in the population and homogeneity of variance, an ANOVA was chosen in order to allow comparison to previous research. The independent variable was the combination of book sizes used during two 15-20 minute read-aloud sessions per week. The dependent variable was scores on the Sand (Clay, 1972) and Stones (Clay, 1979b) concepts of print tests. The level of significance was set for .05.

The independent variable has five levels. The five combinations of book size are:

- 1) (BBBB) big book/big book - big book/big book
- 2) (bbbb) small book/small book - small book/small book
- 3) (BbBb) big book/small book - big book/small book
- 4) (bBbB) small book/big book - small book/big book
- 5) (0000) Control - no extra read-aloud sessions

Quantitative Questions and Hypotheses

1) What impact does the use of big books alone during read-aloud sessions have on kindergarten children's construction of knowledge about print?

Statistical hypothesis: Big books will have no impact on kindergarten children's construction of knowledge about print.

Research hypothesis: This question was addressed by comparing (BBBB) big books alone to (bbbb) small book only.

A significant difference would be expected with (BBBB) showing the greater gains from pretest to post test due to the increased exposure to the connection between print and speech (Holdaway, 1979).

2) Is the repeated reading of one size book as effective as the use of two different size books in facilitating children's construction of concepts about print?

Statistical hypothesis: There will be no difference in kindergarten children's construction of knowledge about print as a function of the combination of book sizes used during read-aloud sessions.

Research hypothesis: This question was addressed by comparing the performance of children in (BBBB) big book only and (bbbb) small book only to that of (BbBb) big/small and (bBBB). Due to the greater number of relationships children could form between print, pictures, story and book by having two different sizes presented (Foreman & Hill, 1984) either combination of sizes would be expected to be higher than any one size used alone.

3) Does the order that two different size books are read aloud to children make a difference in their construction of concepts about print?

Statistical hypothesis: There will be no difference in kindergarten children's construction of knowledge about print as a function of the order in which two different size books are read during read-aloud sessions.

Research hypothesis: This question was addressed by comparing the performance of the (BbBb) group to that of the (bBbB) group. Based on the fact that children would have heard the story during the first reading and be more aurally familiar allowing focus on the print (Holdaway, 1979) during the second and fourth readings, the small book followed by the big book (bBbB) would be expected to show the greatest gains.

Population. All kindergarten children in Wagoner, Oklahoma school district, a small rural town in Northeastern Oklahoma, attend classes in one centralized location, Lincoln Early Learning Center. Lincoln houses all of the district's preschool, prekindergarten, preschool special education and kindergarten classes. The district has a total of 2186 students (preschool - 12th grade) according to Oklahoma State Department of Education records for the 89-90 school year. There were ten half-day sections of kindergarten operating for the 1989-90 school year, comprising 156 children. There were 85 attending in the morning and 71 in the afternoon. The entire district's morning kindergarten enrollment made up the population. All five kindergarten teachers and the principal expressed interest and enthusiasm in participating in the project.

According to the Wagoner Chamber of Commerce, Wagoner is a small town of 6921 people. It is located in Northeastern Oklahoma, twenty-five miles southeast of Tulsa.

The district has a mixture of urban and rural families reflecting a variety of socio-economic levels and races. According to the 1988-89 Oklahoma State Department of Education. Educational Indicator's Report "forty-six percent of the students enrolled in Wagoner Public Schools are eligible for free or reduced lunches" (p. 30). The State Department of Education reports the overall state average eligibility for reduced meals as 34%. The percentage of minority students for the 1989-90 school year is 42% for the entire district with 75% of the minority students being in the Alaskan or American Indian categories.

Permission for participation in the study was obtained from superintendent, principal, teachers and parents prior to the random assignment and selection of subjects. This permission included the right to tape record, videotape or photograph their children for purposes of observation and data collection. The parent had the option of releasing records to the school (see Appendix A).

This study met the requirements set by the Oklahoma State Institutional Review Board and the policy of the Northeastern State University Research Committee for the use of human subjects in research. Steps were taken to insure the confidentiality of all subjects during the quantitative and qualitative aspects of this study. Each subject was assigned a number and all data summaries specify number only. No use of any names was involved in reporting results. Teachers or school administration may have access

to data for those children whose parents agreed for it to be used for educational purposes in the classroom.

Selection of Sample

Parent permission slips were initially sent home with eighty-five children. Seventy-four children returned signed permission slips. Only one signed form refused to allow the child to participate though another declined to allow videotaping even though the child could be involved in other forms of the project. Of the seventy-three eligible children, sixty-nine were pretested. One child moved during the course of the study while another child switched to the afternoon session. Since this occurred in the smallest group and due to the fact that the statistical analysis, called for equal groups, a number was chosen between one and fourteen and that child's score eliminated from groups having fourteen subjects. The statistical analysis was then carried out on sixty-five children representing five groups of thirteen children each. Each of the five morning classes represented a group and were randomly assigned to a treatment condition.

Description of the Sample. According to school records twenty-four of the sixty-five children in the sample represented minority populations or 37%. Fifteen of those were classified native American, eight were black and one Oriental. The percentage of minorities in the entire

kindergarten population (morning and afternoon) was also 37% or fifty-seven out of a total of 156 children enrolled.

The average ages of the children in the sample as of September 1, 1990 when the study was begun was five years eight months. The youngest child was five years one month and the oldest was six years nine months. Girls outnumbered boys in the entire population and this was reflected in the sample. Boys made up only 38% of the entire combined morning and afternoon kindergarten population. They made up 35% of the sample while girls comprised 65% of the sample.

Table 3.1

DESCRIPTION OF SAMPLE USED FOR QUANTITATIVE ANALYSIS

| GROUP | AVERAGE AGE | AGE RANGE | # OF MINORITY | BOYS | GIRLS |
|---------------------------------|--------------|-----------------------------|------------------|---------------|---------------|
| A1(BBBB) | 5 yrs 7 mths | 5/1 - 6/10 | 2 | 2 | 11 |
| A2(bbbb) | 5 yrs 7 mths | 5/2 - 5/10 | 6 | 7 | 6 |
| A3(BbBb) | 6 yrs 0 mths | 5/7 - 6/09 | 7 | 4 | 9 |
| A4(bBBB) | 5 yrs 8 mths | 5/3 - 6/02 | 3 | 6 | 7 |
| A5(0000) | 5 yrs 8 mths | 5/1 - 6/09 | 6 | 4 | 9 |
| ----- | | | | | |
| OVERALL FOR SAMPLE | 5 yrs 8 mths | 5 yrs 1 mth/ 6 yrs 9 mth | 24 (37%) | 23 (35%) | 42 (65%) |
| ENTIRE SCHOOL DISTRICT PK-12 | | | 914 (42%) | 1116 (51%) | 1070 (49%) |

Instrumentation

Quantitative assessment consisted of performance by the child on Marie Clay's concepts of print tests Sand (1972) and the alternate form Stones (1979b). Each assessment

consisted of a twenty-page specially made children's book in which picture, print and other factors have been varied. In a relaxed, one-on-one read-aloud context assessment was carried out as the book was read. The key factors consisted of:

- 1) book orientation - by handing the child the book and checking how the child holds and opens the book. The child is asked to point to the front of the book.
- 2) whether print or picture carry the message - the child is asked to point where the researcher should begin reading.
- 3) directionality of lines of print, page sequences and directionality of words - the child is asked which direction to go to continue reading and to see if he/she detects irregularities.
- 4) relationship between written and oral language - the child is asked to follow along with a finger as the observer reads.
- 5) knowledge of words, letters, capitals, space and punctuation - the child is asked to point to examples of each.

Results of the assessment session were recorded on a one page protocol with a simple one point for pass or zero for fail notation and room for any comments that might be added. The total score possible is 24. For example of Protocol See Appendix B.

Reliability. All pretests and post tests were carried out by the researcher on the Sands (Clay, 1972) or Stones (Clay, 1979b) concepts of print test. Likewise the interviews were all conducted by the researcher. Care was taken to keep procedures, questions and recordings consistent.

The concepts of print assessment has been compared to other measures for the purpose of establishing concurrent validity.

Canonical correlations, using the concurrent Sand and ROL (Record of Oral Language) as one variable set and the MRT (Metropolitan Readiness Test) as the second variable set, were as high as .87. (Day and Day, 1978a, p. 1)

Day and Day (1978b), Rogers (1987) and Brown (1984) all found that sex was a significant factor in performance on the Sand test with females scoring significantly higher. These studies also identified age and socio-economic status as factors influencing scores. The increase for females was not found in John's (1980) study using first grade children.

Clay (1977) reports a reliability coefficient of .95 based on 40 urban children aged 5-0 and a validity coefficient of .79 with word reading for 100 children aged 6-0. Stanines based on 320 urban children aged 5-0 to 7-0 were developed in 1968. All were done in New Zealand and some caution should be used with them (Goodman, 1981) because of the small sample. The pretest and post test

design was added to this study so that each child is compared against himself, minimizing the effects of the identified factors.

In the Handbook of Reading Research, Pearson (1984) describes Clay's Concept of Print Test (CAP) (1972) as an edumetric test that is construct referenced which can be used to directly assess a child's conceptual knowledge of print conventions (p. 166). Pumfrey (1985) reports the test-retest reliability coefficients between Sand (Clay, 1972) and Stones (Clay, 1979b) as .73 to .89 and split-half internal consistency coefficients of .84+ .88 based on a small group of kindergarten children.

Procedures

Read-aloud sessions took place on Tuesday and Thursday and were all conducted by the same person: a university work-study student which allowed the researcher to observe and videotape during the reading process. This helped control for differences in voice, emphasis and reading style that might have occurred between different readers. Five different book titles were chosen to read. All were available in big and small form from the Ribgy Education Company. The company was chosen for the quality of their books, and because teachers in Wagoner had not used them before.

The read-aloud sessions took place inside the kindergarten classroom in order to provide a warm, secure

environment for the children that would be as natural and familiar as possible. Read-aloud sessions took place approximately the same time each Tuesday/Thursday and lasted from 10-15 minutes.

The entire study began after Labor Day in September and covered twelve weeks. The pretest took one week to administer working with several children each day. This was followed by five weeks of read aloud with a different book title each week. Post tests covered three weeks due to illness and school being out for district teachers meeting. Following the completion of the post tests the final interviews were conducted over the next three weeks on Tuesday and Thursday between 8:30 and 10:00 and the study concluded before the Thanksgiving holiday in November.

A description of an actual pretest session follows. Several children's names would be called aloud. Within that list usually a child would volunteer to come first over to the area of the classroom or activity center set aside for that purpose. Once a child was seated in a small chair at a small table in the classroom the researcher put two books which were identical in front of him and asked, "What can you tell me about these two books?" The usual response was "They're just the same!" If the child gave no response or simply shrugged his shoulders a second question was asked, "Well, what would it be like if I were to read you this story and then read you this other story?" Regardless of

the response - "Same or different." the follow up question was "Well, how can you tell?" The response was noted.

Those two books were placed aside and the Sand book was handed to the child with the spine of the book in a vertical position. This begins the Sand assessment by asking the child to show the front of the book. The researcher then asked the child to get the book ready so he could help the researcher read it.

Once the Sand assessment was completed (5-7 minutes) that book was set aside and the deck of twenty-cards used for the qualitative part of the study were shown to the child. The entire pretest session lasted 10-12 minutes per child.

Following the pretesting of all children in the sample the read aloud phase began. The actual reading was done on Tuesday and Thursday between 9:00 a.m. and 10:15 a.m. A schedule was devised so that the reading occurred in each classroom at approximately the same time except when special assemblies, guest speakers or field trips necessitated changing the order. Each session lasted from 10 to 15 minutes during which time the children gathered seated on the floor in front of the reader who sat in an adult size chair. All readings were done by the same undergraduate work study student hired for that purpose. When a big book was used an easel was utilized as much as possible. The reader tracked her reading with her hand on both size books and paused, responded, and questioned children consistently

across all sections as much as possible. The classroom teacher remained in the room during the readings.

Each reading session consisted of two readings of the same story but the size or combination of books depended on the treatment group. A book title was repeated twice on Tuesday and again twice on Thursday with a new title introduced each Tuesday for five consecutive weeks. All books were purchased from The Rigby Education Company. The titles chosen for their child appeal, predictability, and novelty to this particular school system were:

Week 1 Crocodile Beat, Jorgensen & Mullins (1988)

Week 2 Who's in the Shed, Parkes (1986)

Week 3 The Enormous Watermelon, Parkes & Smith (1986)

Week 4 McBungle's African Safari, Parkes (1987)

Week 5 Who Sank the Boat, Allen (1982)

The post test procedure varied from the pretest only in that the comparison of books was not done since more than 95% of the children said they were the same. The session began by handing the child the Stones book and proceeded with the CAP assessment. This was followed with the deck of twenty cards in the same way it was done during the pretest. Like the pretest this took place within the child's classroom while the other children were engaged in various activities.

Qualitative Study

Design

Ongoing with the quantitative design was qualitative data collection. One of the main focuses of the study was the meaning children ascribe to their experiences with big books and whether the combination of two different sizes of books during read-aloud sessions facilitates the construction of concepts about print more than one size repeated. Adaptations of Piaget's clinical interviews (Piaget, 1965) were used to gather information regarding children's construction of knowledge about print as a function of exposure to extra repeated read-aloud sessions and the use of big books in particular.

Qualitative Questions and Hypotheses

1. a. What meaning do children ascribe to their exposure to big books?
- b. Are they seen as equivalent or identical to the smaller version?
- c. Which version do they prefer?

Research Hypothesis:

- a. Kindergarten children will assimilate big books into their current concepts of books and use them to construct their concepts about print.
- b. Following exposure to big and small books together (BbBb or bBbB) kindergarten children will perceive different

size versions of the same book as equivalent - able to identify the similarities and differences. Exposure to only one size book (BBBB), (bbbb) or (0000) would result in children being less likely to see two different size versions of the same book as equivalent.

c. Children will express criteria for preference of book size based on their experience to different size books.

2. a. What criteria do kindergarten children use to determine which characters can be read or not read?
- b. Does their criteria change over a five week period of time?
- c. Are there any differences among children in the different treatment groups? (Ferreiro and Teborosky, 1982)

Research hypothesis:

a. There will be variability in the criteria children use to determine which characters can or cannot be read due to each child's internal construction of knowledge (Piaget, 1967; Ferreiro and Teborosky, 1982).

b. There will be changes over the five week experimental period in the criteria children use to determine which characters can or cannot be read as a function of their continuous construction of knowledge.

c. There will be more changes in the criteria used to determine which characters can or cannot be read for those

groups exposed to more than one size book (BbBb) or (bBbB) than for either (BBBB) or (bbbb) or (0000) due to the increased number of relationships which can be formed between print, picture, size, book and story (Foreman & Hill, 1974).

3. Do children ask as many or more different kinds of questions when big books are used for read-aloud sessions as when small books are used? (Yaden, Smolkin and Conlon, 1989; Manning, Manning & Cody, 1988; Wells, 1986)

Research hypothesis: There will be a a greater number and greater variability of type of questions asked for groups using big books (BBBB, BbBb, bBbB) than for groups not using big books (bbbb, 0000). Since big books are designed to more closely resemble the reading which occurs naturally at home (Holdaway, 1979; Anderson, 1987) where a great deal of exchange takes place between parent and child (Yaden, Smolkin & Conlon, 1989) then more questions would be expected in the classroom as well.

Selection of Qualitative Sample

For the card sorting task the entire sample of children initially pretested was used. For the more indepth interviewing a subsample was chosen from the children involved in the quantitative study. Five children's names

from each of the treatment conditions were randomly chosen for the final interviewing.

Qualitative Instrumentation and Procedures

1. Card Sorting Task

Following the administration of Clay's Concepts About Print Sand (1972) pretest and again after the Stones (1979b) post test, while an individual child was still cooperating with the researcher, another assessment was conducted. A stack of twenty plain white 3 x 5 inch laminated cards upon which letters, numbers or combinations of letters had been written were handed to the child. The researcher explained, "Look at these cards carefully and tell me if you think they are something somebody could read or if some are and some aren't." (Ferreiro and Teberosky, 1982, p. 27-28).

I don't expect that you should know how to read these things yet but I just want you to tell me if these are things somebody could read or if no one could read them. I'll show you each one and you just say yes or no, o.k.? Do you think this is something somebody could read?

The researcher showed the child each of the twenty cards and made two piles depending on the child's response to each. Following this the researcher would comment, "How did you know how to do that so quickly? What is it about these that makes them something no one could read?"

Children's comments were written down and the child was thanked for working with the researcher and asked if he/she would let the next child know it was his/her turn. This assessment lasted five to ten minutes. The object of the assessment was not to determine the actual number of real words chosen but to see what if any criteria the child used to sort the cards. After the child had looked and sorted the cards the researcher asked how the child decided they were to read or not to read. Results from this allowed comparison to the findings of Ferreiro and Teborosky (1982) who found minimal number of characters and variation of characters as the predominant criteria for classification.

There were ten actual words and ten non-words. A copy of the actual cards are found in Appendix D. The list of actual characters follows:

- | | |
|---------|---------------|
| 1. A | 11. ee |
| 2. I | 12. MMMM |
| 3. 2 | 13. AAAA |
| 4. the | 14. SSSSSS |
| 5. MOM | 15. DTSZ |
| 6. out | 16. COMPANY |
| 7. call | 17. on |
| 8. s | 18. it |
| 9. 45 | 19. re |
| 10. 9 | 20. VACATIONS |

Ferreiro and Teborosky (1982) used printed capitals and cursive lower case letters because that is what is used in Argentina's school system. The cards for this study are an adaptation using comparable characters but in upper or lower case print only.

2. Final Interview

The final interviews were conducted in the hallway at a table and chairs that were already there. This location was chosen because all of the big and small books were shown during the interview and more space was needed than could be provided in any classroom. Also it would have been more distracting to those students not involved in the interview process.

The researcher entered a classroom and gave the teacher the names of the children needed. Depending on the level of involvement in classroom activities or their eagerness to come the teacher chose who would come. The researcher usually held the child's hand and visited about the days activities as they walked to a central area between all of the classrooms where the interviews took place.

After being seated the researcher asked the child, "Do you like to read books?" and thus began the questions listed on side one of the final interview form (Appendix E).

Upon completion of asking and recording the child's responses to side one, two identical regular size books were placed on the table in front of the child. The set of questions were asked and responses recorded. Next the procedure was repeated with two books, one regular size and one big book of the same story but different from first set. All children interviewed were shown books which had not been read to them in class. The same set of questions were

asked. After these were placed aside the child was shown another set of two books. For this a regular size hardback copy of The Very Hungry Caterpillar by Eric Carle (1969) was used along with a mini size hardback version of the same book (1987). Each time the same questions were asked. In addition to the questions found on the interview form children were asked "would one book take longer to read than another?" after each set of questions.

Then each child was given a set of six different little books. The researcher laid the big books on the floor so they could be easily seen and asked the child to put the little book with the big book that was just like it.

Each child was allowed to handle the books if he/she initiated an interest through touching, asking or looking at the books. Each of the treatment group children were asked, "Do you remember hearing any of the stories? Which one do you remember the most about? Which was your favorite? For those not indicated the researcher asked "Can you tell me any thing about this one?" The child was then asked which specific book he/she would like to have his/her teacher read to the class?

The entire final interview process took fifteen to thirty minutes depending on how detailed the children's answers on their retelling of the stories. Each was then walked back to their room and another child whose name had been chosen at random ahead of time was asked to "look at some books and visit" with the researcher.

3. Videotaping

The read aloud sessions were videotaped so that the number and type of questions asked by all children could be recorded to compare findings to those of Yaden, Smolkin and Conlon (1989) and Manning. Manning and Cody (1988) who found children asking many questions in natural home read-aloud sessions with responsive parents. The videotapes were used for observation purposes of the actual behavior and verbal differences of reader and children during the different treatment conditions.

Overall Threats to Validity

Internal Validity

In order to increase the contrast between the experimental and the control groups, teachers in all the kindergarten classes were asked not to use any big books or any of the titles used in the experimental treatment in their classrooms until after the study was completed. Then the materials would be made available to all children. The book titles chosen for this study were ones that were published in 1988 or 1989 and purchased from Ribgy Company which specializes in materials from Australia and New Zealand. This helped insure that the children in the study had not been exposed to them previously. The big books have enlarged pictures and print but identical format, layout and design as the small book. Big books will be 11" x 17" or

larger and have from 24 to 32 pages. All five titles were fictional narratives. Some but not all had repetitive, predictable portions that would facilitate children's interaction.

Other efforts to increase for internal validity included the random assignment of groups to treatment conditions and the random selection of students for assessment. This spread the effects of previous history, gender, statistical regression, maturation and differential selection across all groups equally. By including a control group the effects of testing instrumentation (quantitative and qualitative) and selection-maturation interaction were made more detectable.

This left only experimental mortality out of the eight main threats to internal validity identified by Campbell and Stanley (1986). This was a minimal factor with only two children moving during the first eight to ten weeks of school. Precautions such as taking time to build rapport with the children and sampling a large enough group to begin with help keep subject numbers high enough. It was uneven class sizes that caused smaller groups since the child who moved was in the smallest class.

Practice effect can sometimes be a factor in repeat measure designs (Keppel, 1982). Although not eliminated, the use of an alternate form of the pretest for the post test does help minimize this effect as well as the five week intervening time period between the two assessments.

External Validity

By randomly selecting from only those children who attend kindergarten in the morning the ability to generalize findings is more limited. The use of only books imported from Australia helps assure the sample will not have prior exposure to the books but may weaken the ability to generalize to all big and small books. Choosing books with high quality text and coordinated illustration could be erroneously generalized to books of questionable quality or value for children. With this study's coordination of qualitative and quantitative aspects there is as much concern with the depth and quality of information gained from the individual children involved as to the ability to generalize the findings to all children.

Summary

A qualitative and quantitative study was conducted simultaneously with kindergarten children to assess and observe the meaning they ascribe to experiences with a combination of big and small book sizes during extra read-aloud sessions conducted in their classroom by someone other than their teacher.

CHAPTER IV

RESULTS

Introduction

This chapter deals with the presentation of the results. The chapter is divided into two major sections:

I. Quantitative Component

A. Questions

B. Summary of Procedures

C. Results

1. Means and standard deviations by group

2. ANOVA summary table

D. Discussion

E. Summary

II. Qualitative Results

A. Final Interview

1. Summary of procedures

2. Questions

a. Meaning

1) Results

2) Discussion

b. Equivalent/Identical

1) Results

- 2) Discussion
 - c. Preference
 - 1) Results
 - 2) Discussion
- B. Card Sorting Task
- 1. Summary of Procedures
 - 2. Questions
 - a. Criteria
 - 1) Results
 - 2) Discussion
 - b. Change in Criteria
 - 1) Results
 - 2) Discussion
 - c. Difference
 - 1) Results
 - 2) Discussion
 - 3. Summary
- C. Videotaping
- 1. Summary of Procedures
 - 2. Question
 - a. Number of questions
 - 1) Results
 - 2) Discussion
 - b. Type of Questions Asked
 - 1) Results
 - 2) Discussion
 - c. Comparison by Group

- 1) Results
 - 2) Discussion
2. Summary
 3. Compilation of Observations

Quantitative Component

Questions

The overriding quantitative questions considered for this study are:

1) What impact does the use of big books alone have on kindergarten children's construction of knowledge about print?

2) Is the repeated reading of one size book as effective as the use of two different size books in facilitating children's construction of concepts about print?

3) Does the order that two different size books are read aloud to children make a difference in their construction of concepts about print?

Summary of Procedures

The Sand Concepts About Print Test (Clay, 1972) was given to five classes of kindergarten children. This was followed by five weeks of supplementary read aloud sessions. The fifteen to twenty minute read aloud sessions occurred twice a week by the same person from outside the school

system. Each week a book was read four times, twice on Tuesday and twice on Thursday, exposing the children to five different stories over the five week period. The groups varied by the size of book used and the sequence in which different book sizes were presented. The Stones Concept About Print Test (Clay, 1979b) was used as the post test instrument.

The five groups were:

- A₁ (BBBB) Big book only used
- A₂ (bbbb) Small book only used
- A₃ (BbBb) Big book followed by small book
- A₄ (bBbB) Small book followed by big book
- A₅ (0000) No books used - control

Quantitative Results

The between-within analyses of Variance (ANOVA) carried out on the Oklahoma State University IBM computer using SPSS-X (Wylbur) program comparing the children's scores on the Sand Concepts About Print Test (Clay, 1972) pretest and the Stones post test produced the following results. Table 4.1 shows the means and standard deviations for each group on both pretest and post test as well as the difference in means from pretest to post test. There was a range in the means from 6.0 to 7.462 on the scores of the Sand pretest with A₅ (0000) being the lowest and A₃ (BbBb) scoring the highest. On the post test the lowest mean was A₂ (bbbb) with 6.923 and the highest was A₁ (BBBB) with 9.385. The

greatest difference in means from pretest to post test occurred in A₁ (BBBB) with 1.539 and the smallest difference was .154 for A₂ (bbbb).

Table 4.1

SUMMARY TABLE OF MEANS AND STANDARD DEVIATIONS BY GROUP

| | PRETEST (Sand) | | POSTTEST (Stones) | | Difference |
|-----------------|-------------------|-----------|----------------------|-----------|------------|
| | Mean | Std. Dev. | Mean | Std. Dev. | |
| A1(BBBB) | 6.846 | 3.671 | 9.385 | 2.987 | 1.539 |
| A2(bbbb) | 6.769 | 2.774 | 6.923 | 3.402 | .154 |
| A3(BbBb) | 7.462 | 3.178 | 8.885 | 3.754 | .923 |
| A4(bBbB) | 6.615 | 4.073 | 7.154 | 3.184 | .539 |
| A5(OOOO) | 6.000 | 3.786 | 7.462 | 4.576 | .46 |
| ===== Totals | 6.738 | 3.447 | 7.862 | 3.627 | 1.124 |

The ANOVA summary is shown in Table 4.2. The alpha level was set at .05.

Table 4.2

SUMMARY TABLE: BETWEEN-WITHIN ANOVA

| Source | DF | SS | MS | F | Table F | Sig. of F |
|------------------------------|----|---------|-------|-------|---------|-----------|
| Between Subjects | 64 | | | | | |
| 1) Book Sizes (A) | 4 | 45.65 | 11.41 | .51 | 2.53 | .727 |
| Error: Between Subject | 60 | 1337.15 | 22.29 | | | |
| Within Subjects | 65 | | | | | |
| 2) Time (B) | 1 | 40.99 | 40.99 | 12.48 | 4.00 | .001 |
| 3) Book Sizes x Time (A x B) | 4 | 22.35 | 5.59 | 1.70 | 2.53 | .162 |
| Error: within sub | 60 | 197.15 | 3.29 | | | |

- 1) $.51 < 2.53$ The difference between book sizes is not significant. The null hypothesis is not rejected.
- 2) $12.48 > 4.00$ The difference between scores on the Sand and Stones versions of the Concepts About Print Test is significant. Reject the null hypothesis.
- 3) $1.70 < 2.53$ The interaction between book sizes and concepts of print test is not significant. The null hypothesis is not rejected.

All groups increased their scores significantly from pretest Sand to post test Stones. The average means for all groups for the Sand was 6.738 and for Stones was 7.862. An analysis of variance performed on these data revealed significant differences among test means $F(1, 60) = 12.48$, $p < .05$.

No statistically significant differences were found between groups of different book sizes in their performance on the concepts of print tests. No specific comparison tests were conducted since no significant main effects were found.

Quantitative Discussion

Several extraneous factors might have influenced the data gathered in this study. The most important was the skewed population within the intact classes used. Girls and boys were not proportionate in all groups. Table 4.3 shows the number of females and males for each class and then in the statistical sample used for the ANOVA.

Table 4.3

NUMBER OF FEMALES AND (MALES) BY CLASS
AND SAMPLE FOR EACH GROUP

| | Entire Class | Statistical Sample |
|-----------------------|--------------|--------------------|
| A ₁ (BBBB) | 15 (6) | 11 (2) |
| A ₂ (bbbb) | 8 (8) | 6 (7) |
| A ₃ (BbBb) | 9 (6) | 9 (4) |
| A ₄ (bBbB) | 9 (7) | 7 (6) |
| A ₅ (0000) | 10 (7) | 9 (4) |

Snow (1987) reported kindergarten girls answering "an average of one more question than boys (p. 14) on Clay's Concepts About Print Test (1972, 1979b). Brown (1984), too reported kindergarten "females scoring significantly higher than did males" (p. iv) at each testing period. Thus having disproportionate groups in both A₁ (BBBB) and A₅ (0000) and

A₂ (BbBb) could compromise the results. However, the three groups (A₁, A₂, A₃) with the highest number of females did not have the three highest CAP score means on the pretest although they did have the three highest CAP score mean on the post test. Rather than showing that girls always score higher these results may be showing girls come for school with more exposure to books and print and were more ready for the social transmission of knowledge about print. Johns (1980) found no sex differences on the CAP in his study of high socioeconomic first graders. Harste, Woodward and Burke (1984) also report no differences in three-year-olds' knowledge of environmental print on the basis of sex or race.

Appendix J shows the results of calculating the means from raw scores. Although females scored higher than males (7.37 > 6.52) on the pretest for all groups, males showed higher gains from pretest to post test (1.65 > .182) with the highest gain being made in the A₁ (BBBB) group. In fact males gained in every condition, whereas females gained only in A₁ (BBBB) with big books only and stayed the same or decreased scores in the other three groups. The same comparison done with the minority children in the sample found that non-minority children scored higher than minority children on the pretest (7.127 > 5.655) although minority children made slightly higher gains (1.3144 > 1.3072) from pretest to post test with the highest gain coming in the A₁ (BBBB) group followed by A₂ (0000) where print was modeled

through the writing process. Only in A₂ (bbbb) did minority children's scores decrease slightly.

When means for minority females were compared to minority males the males had a higher pretest mean than females (7.325 > 4.91) but the entire sample only had seven minority males and none were in the A₁ (BBBB) group. Yet, the biggest gain came for minority males with a 1.215 increase from pretest to post test as compared to 1.0 for minority females. For females the only groups which saw any change were A₁ (BBBB) with a 3.5 gain and A₅ (0000) with a 1.5 increase. For the groups with minority males the largest increase was from A₅ (0000) with a 3.5 gain followed by a 1.36 gain from group A₃ (BbBb). The only loss was in A₂ (bbbb) with one child representing a 2.0 loss which could have resulted from health reasons or other factors besides the treatment.

The numbers are small but it does seem that for this sample, the modeling of print through reading the big book alone resulted in the highest gains for minority males and females and non-minority males. The highest pretest to post test gain for the three comparisons was for all males with 1.653 which was greater than minorities of both sexes at 1.3144 or for only minority males at 1.215. The greatest gain in one group was 4.0 for males in A₁ (BBBB) but represents only three children. The second highest single group gains are 3.5 for minority females in A₁ (BBBB) which represents only two children.

Another extraneous factor possibly influencing the results was the teaching styles of the five participating teachers. Each teacher was asked not to use big books during the entire study period. However, no other constraints were put on their teaching practice. They were asked to read aloud to children as they would usually do using only small books. Two of the five teachers asked permission for using their own big books with their afternoon classes while the study was in progress with the morning group. These personal big books were stored during the morning sessions.

From our observation all classrooms were arranged in centers but were using the Alpha-time curriculum which focuses on a letter a week and results in more traditional, isolated letter activities. In visiting the classroom of the teacher of A_s (0000) after the study was completed, the researcher noticed large charts and samples of children's writing. None of the other teachers had been doing much modeling of the writing process other than helping children write their names, items which start with the letter of the week and labeling objects in the classroom. The teacher shared the large language experience charts and samples of books the children had made for the classroom. One chart was "Our trip to Pizza Hut." The letter books had examples that each child had written and illustrated about something which started with a specific letter. This modeling of the writing process would expose children to the conventions of

words and print and could also help explain why the CAP scores for the A₁ (0000) control group were the second highest when compared to treatment groups. Only A₁ (BBBB) big books only scored higher on the CAP. Perhaps rather than serving as a control A₁ (0000) actually became another treatment with the modeling of print through writing being compared to the modeling of print through the enlarged text in big books. Ideally, teachers would demonstrate reading with different size books as well as model the writing process through language experience and authentic writing in order to maximize children's exposure and opportunities to use print on their own. The A₁ (0000) teacher may have done this to a greater extent than the others.

The other way in which teacher style may have had an impact was in the teacher's definition of appropriate read aloud behavior. For several of the teachers it seemed their preference was children sitting still and remaining silent as evidenced by their comments and interventions. This may have inhibited the children's active questioning, construction, and verification of knowledge about print.

The nature of the CAP test itself may have impacted the results. The research literature identifies a concern over reliability (Johns, 1980; Goodman, 1981; Clay, 1972). Sand and Stones (Clay, 1979b) seem different in their difficulty and this would affect the results. Snow (1987) used the two forms but used Stones for the pretest rather than post test. In each group there were children whose scores declined from

pretest to post test. This could reflect the health of the child the lack of sensitivity of the instrument or an inconsistency of the examiner

Clay's Concepts About Print Test (1972 1979b) may be assessing social knowledge about print It may be questionable whether the items on the test correspond to the knowledge children construct for themselves about print. No question on the CAP assesses what meaning the child is constructing or which reading strategies such as predicting sampling phonetic areas or confirming (Weaver 1988) were being used Goodman and Altwerger (1981) devised another assessment similar to Clay's but couched the questions within the child's understanding of the story rather than isolated from meaning Other researchers are also in the process of developing even more meaningful assessments of what children are doing with print and books (Harris 1990).

Marie Clay, who has made a great contribution to our understanding of the reading process in young children states

I do not like to see it [Concepts About Print Test] reduced to a mere assessment device when it can be such a valuable guide for the teacher about one aspect, but only one aspect, of learning during the early stages of reading acquisition
(Clay, 1979b p 27)

Clay intended for CAP to be only one part of a battery of assessments about concepts about printed language. Clay saw

CAP as "a sensitive indicator of one group of behaviors which support reading acquisition" (p 27) She felt the early detection of reading problems in children could result in remediation Yet because of the number of studies which had used CAP previously (Brown 1984; Lamb, 1986 Johns 1980) CAP was chosen to allow comparison to those studies.

Another factor which may have contributed to nonsignificant differences was the time span over which pre and post tests were given In trying to work around the schools schedule only a short time span was available to work with children without cutting into their activity, music or outside time In trying to avoid this there would sometimes be one to two weeks difference between when one group was assessed compared to another Since the entire treatment covered only five weeks this is a significant amount of time in a kindergartner's life as they are continuously constructing knowledge about print In fact that was the one item which did result in a statistically significant difference. All groups made significant changes from pretest to post test although there were not significant differences among the groups. This result may be more a function of time and less a function of the treatment condition Perhaps if the treatment had run a longer course, there may have been a treatment effect

Quantitative Questions and Hypotheses

1) What impact does the use of big books alone during read aloud have on kindergarten children's construction of knowledge about print?

No statistically significant differences were found by the between-within ANOVA (Linton and Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concepts About Print Test (1972, 1979b) as a function of the combination of book sizes used during supplementary read aloud sessions conducted twice a week over a five week period of time. The null hypothesis was not rejected.

2) Is the repeated reading of one size book as effective as the use of two different size books in facilitating children's construction of concepts about print?

No statistically significant differences were found by the between-within ANOVA (Linton & Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concepts About Print Test (1972, 1979b) as a function of the combination of book sizes used during supplementary read aloud sessions over a five week period of time. The null hypothesis failed to be rejected.

3) Does the order that two different size books are read aloud to children make a difference in their construction of concepts about print?

No statistically significant differences were found by the between-within ANOVA (Linton and Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concepts About Print Test (1972, 1979b) as a function of the order in which two different size books are read during supplementary read aloud sessions twice a week over a five week period of time. The null hypothesis failed to be rejected.

Qualitative Results

Final Interview

Summary of Procedures

The final interviews took place after the quantitative component was completed (pretest, read aloud sessions and post test). They were conducted with a subsample of 25 from all those pretested. Five children's names were randomly chosen from each group. Following Piaget's clinical interview method (1965) a set of questions was asked all children. The followup questions were a function of the child's comments or questions. These interviews took place outside the regular classroom so that the entire collection of books could be displayed without disturbing the classroom routine. A copy of the interview questions is provided in Appendix C. Children were interviewed as to their views on books, reading, whether they related various sizes of the

same book as identical or equivalent and their preference for book size under varying circumstances.

Questions

1. a. What meaning do children ascribe to their exposure to big books.
- b. Are they seen as equivalent or identical to the smaller version?
- c. Which version do they prefer?

Research hypothesis:

(A) Kindergarten children will assimilate big books into their current concepts of books and use them to construct their concepts about print and story.

(B) Following exposure to big and small books together (BbBb or bBbB) kindergarten children will perceive them as equivalent--able to identify the similarities and differences.

No exposure to two different size books (BBBB), (bbbb) or (0000) would result in kindergarten children perceiving two different size books as completely different, neither equivalent or identical due to their strong focus on perceptual cues such as size (Piaget, 1967).

(C) Children will express criterion for preference of book size based on their experience to different book sizes.

1. a. What meaning do children ascribe to their exposure to big books?

The last part of the final interview dealt with children's recall of the details or story line in the books which had been read to them. For this section the control group was not included since they had not heard the books. Three of the five children interviewed from A₁ (BBBB) who had been exposed to only big books were able to tell some part of the story for all five books shown to them. The other two in that group related events from the story for three and four books. This was in sharp contrast to the five children from A₂ (bbbb) who had only been exposed to small books who could each retell events in only one which may have been their favorite book. Similar to A₂ was the results of A₃ (BbBb). These children could name several of the books but recall the details of none, one or two books. The A₄ (bBbB) group results were more similar to A₁ (BBBB). One child could remember events in all of the books and the other four children could recall events in four of the five books.

The sample for this component was small (20 children, five from each of the four active treatment groups) but the results do support Anderson's (1987) study and Combs (1987) study which found big books increasing comprehension and recall. For this sample there was a difference between the children who had been read to from a big book for the second reading from those who had been read a big book first

followed by the small book in that more elements of more books could be recalled. All groups involving big books did better at recalling parts of the story than did children exposed to only small books.

1. b. Are they seen as equivalent or identical to smaller version?

In order to view children's thinking on whether books were seen as identical or equivalent the children were asked if the books were the same or different and how we could find out for sure. For this study equivalent was defined as a child being able to give both similarities and differences about two different book sizes of the same title. Identical was defined as being able to see only how they were the same.

Table 4.4 shows the results of the pretest question where children were shown two identical copies of Beverly Cleary's The Growing Up Feet (1987) as well as those of the final interview where children were shown two size copies of The Hobyahs (Parkes and Smith, 1987) and two size copies of The Very Hungry Caterpillar (Carle, 1987, 1969).

TABLE 4.4
 NUMBER OF CHILDREN BY GROUP WHO SAW BOOKS AS
 EQUIVALENT OR IDENTICAL DURING PRETEST
 AND POST TEST INTERVIEWS

| GROUP | PRETEST | | | | POST TEST | | | | | |
|---------|-----------------|------------|-----------|---------------|------------|-----------|------------|-----------|------------|-----------|
| | SAME SIZE BOOKS | | | | SAME SIZE | | BIG/LITTLE | | REG/MINI | |
| | DIFFERENT | EQUIVALENT | IDENTICAL | NOT AVAILABLE | EQUIVALENT | IDENTICAL | EQUIVALENT | IDENTICAL | EQUIVALENT | IDENTICAL |
| A1 BBBB | 1 | 0 | 3 | 1 | 0 | 5 | 5 | 0 | 5 | 0 |
| A2 bbbb | 0 | 0 | 5 | 0 | 0 | 5 | 3 | 2 | 2 | 3 |
| A3 BbBb | 0 | 0 | 4 | 1 | 0 | 5 | 4 | 1 | 3 | 2 |
| A4 bBbB | 0 | 0 | 5 | 0 | 0 | 5 | 3 | 2 | 2 | 3 |
| A5 OOOO | 0 | 0 | 5 | 0 | 0 | 5 | 1 | 4 | 3 | 2 |

Of the fifteen children, five each from groups A₁, A₃, and A₄ which were involved in the use of big books, twelve responded on their final interviews that the big and regular size versions of the same book were equivalent. Three children viewed them as identical. Of the ten children involved with small books only (Groups A₂ and A₅) only four saw those two books as equivalent and six responded they were only the same (identical). When the same question was asked regarding the regular and mini size book of one title,

ten out of the fifteen who had used big books responded that they were equivalent while five saw them as identical. Five of the ten children who had used small books only (A₂ bbbb and A₃ 0000) saw them as equivalent with the other five seeing them as identical.

2. Discussion

As described by Foreman and Kushner (1983)--"This coordination of similarity with differences--knowing how two objects are simultaneously similar and different--is central to cognitive development (p. 56). Foreman and Hill (1984) describe learning encounters which can be designed for children. One such encounter is identity between two objects the same and another is "equivalence different object. same state. With equivalence correspondences we shift so similarities between separate objects, as opposed to two sightings of the same object" (p. 47). Seeing two identical books would be considered establishing identity correspondences and showing children two different size books of the same story and illustrator would be considered encouraging children to establish equivalence correspondences.

It was felt that exposing kindergarten children to more than one size of the same book and allowing them to participate in repeated read aloud sessions would increase their ability to make equivalence correspondences.

By converting Table 4.4 to percentages the results are more clear as shown in Table 4.5

TABLE 4.5
NUMBER AND PERCENTAGE OF CHILDREN BY GROUP STATING TWO
DIFFERENT SIZE BOOKS AS EQUIVALENT OR IDENTICAL

| GROUP | BIG BOOK/REG SIZE | | REG SIZE/MINI BOOK | |
|------------------------------|-------------------|-----------|--------------------|-----------|
| | EQUIVALENT | IDENTICAL | EQUIVALENT | IDENTICAL |
| <u>ONLY ONE SIZE BOOK</u> | | | | |
| A1(BBBB) | 5 | 0 | 5 | 0 |
| A2(bbbb) | 3 | 2 | 2 | 3 |
| A5(OOOO) | 1 | 4 | 3 | 2 |
| TOTAL | 9 (60%) | 6 (40%) | 10(66.66%) | 5(33.33%) |
| <u>TWO SIZE BOOKS</u> | | | | |
| A3(BbBb) | 4 | 1 | 3 | 2 |
| A4(bBbB) | 3 | 2 | 2 | 3 |
| TOTAL | 7 (70%) | 3 (30%) | 5 (50%) | 5 (50%) |
| <u>EXPOSURE TO BIG BOOKS</u> | | | | |
| A1(BBBB) | 5 | 0 | 5 | 0 |
| A3(BbBb) | 4 | 1 | 3 | 2 |
| A4(bBbB) | 3 | 2 | 2 | 3 |
| TOTAL | 12 (80%) | 3 (20%) | 10(66.66%) | 5(33.33%) |

Children involved in Group A₃ (BbBb) and A₄ (bBbB) did choose the big and regular size book as equivalent more often (70%) than those exposed to only one size book (60%). However, they were less able to generalize that to regular and mini size version of a book.

When regrouped so that all groups being exposed to big books are placed together 80% of those children saw the big and regular size book as equivalent while those not exposed

to big books did so only 40% of the time. Those exposed to only small books also had difficulty with the regular and mini size version splitting 50% for each equivalent and identical--exactly what the (BbBb) and (bBbB) groups had done. The A group (BBBB) saw equivalency 100% of the time for both big and regular as well as regular and mini size books. These results may be influenced by sexual differences in the sample. group A₁ was composed of all girls and the other groups had both girls and boys.

Summary

None of the twenty-five children considered the different size books as completely different although some considered them as only the same. A comparison of groups using only one size book to those using two size books found an equal mean of 3 for the number of children seeing the books as equivalent. The presence of big books had a greater effect with the average number of children seeing the big and regular size books as equivalent being four. This is compared to those groups not being exposed to big books which had an average of two children seeing the different size books as equivalent.

The actual criteria children used for justifying their position of seeing the books as identical or equivalent fell into two main categories: looking at the pictures or reading the book. Of the children in groups involved with big books. A₁ (BBBB), A₂ (BbBb), and A₄ (bBbB), six of the

fifteen (40%) mentioned reading as how to find out for sure if the books were the same. Seven (46.6%) mentioned comparing the pictures to validate their answer. Two other children indicated they "just knew."

Of the children exposed only to small books (A₂ and A₅) three out of ten (30%) indicated the book could be read, three (30%) mentioned comparing the pictures or colors, three indicated you could just look and one felt there was nothing you could do to verify or be sure the books were the same or different.

From this small sample children exposed to big books were more likely to give a specific way of validating their answer (40% - reading, 46.6% compare pictures) as opposed to those exposed to small books (30% reading, 30% compare pictures). This may have more to do with the verbal ability of the children randomly chosen than the treatment conditions.

Preferences

1. c. Which version do they prefer?

Children's preference for book size is shown first for reading it themselves, then for having someone read it to the class and finally for looking at the book on their own. This information comes from the final interview and so represents only five children for each group. Each question was asked twice. The first time involved a choice between a

big book The Hobyahs (Parkes & Smith, 1987) published by Rigby (15" x 23") and a regular size book (5 1/2" x 7 3/4"). These books were similar to those used during read aloud. Therefore, the books were unfamiliar to all of the children--not just to the control. The next question asked was offering a choice between a regular size hardback copy of Eric Carle's The Hungary Caterpillar (8 1/2" x 12") (1969) and a mini size hardback copy of the same book (3 3/4" x 5") (Carle, 1987).

TABLE 4.6

BOOK PREFERENCE BY GROUP

| | DON'T KNOW | BIG BOOK | SMALL BOOK | DON'T KNOW | REG SIZE | MINI SIZ |
|---|------------|----------|------------|------------|----------|----------|
| <u>PREFERENCE BY GROUP FOR READING ON YOUR OWN</u> | | | | | | |
| A1(BBBB) | | 3 | 2 | | 2 | 3 |
| A2(bbbb) | | 3 | 2 | | 1 | 4 |
| A3(BbBb) | 1 | | 4 | 1 | 1 | 3 |
| A4(bBBB) | | 3 | 2 | | 2 | 4 |
| A5(OOOO) | - | 3 | 2 | | 1 | 4 |
| TOTALS | 1 | 12 | 12 | 1 | 7 | 18 |
| PERCENT | 4% | 48% | 48% | 4% | 28% | 72% |
| <u>PREFERENCE BY GROUP FOR HAVING READ TO CLASS</u> | | | | | | |
| A1(BBBB) | | 4 | 1 | | 4 | 1 |
| A2(bbbb) | | 2 | 3 | | 3 | 2 |
| A3(BbBb) | | 3 | 2 | | 2 | 3 |
| A4(bBBB) | | 3 | 2 | | 2 | 3 |
| A5(OOOO) | | 3 | 2 | | 2 | 3 |
| TOTALS | | 15 | 10 | | 13 | 12 |
| PERCENT | | 60% | 40% | | 52% | 48% |
| <u>PREFERENCE BY GROUP FOR LOOKING AT ON YOUR OWN</u> | | | | | | |
| A1(BBBB) | | 1 | 4 | | 1 | 4 |
| A2(bbbb) | | 2 | 3 | | 1 | 4 |
| A3(BbBb) | | 1 | 4 | | 0 | 5 |
| A4(bBBB) | | 1 | 4 | | 2 | 3 |
| A5(OOOO) | | 2 | 3 | | 3 | 2 |
| TOTALS | | 7 | 18 | | 7 | 18 |
| PERCENT | | 28% | 72% | | 28% | 72% |

A list of the actual examples of reasons given for book size preference is provided in Appendix F. Children gave reasons such as preferring the big book because it made it easier for all the children to see or the small book because it was easier to handle.

Children do express preferences for book sizes and use a variety of criteria as to why. Novelty might be an uncontrolled factor with both the big and mini size versions being unusual. However, children changed their preference for book size depending on the use it was to serve. Many chose smaller versions to look at or read on their own but preferred larger size books to be read to the class with ease of seeing pictures as the most common reason given.

While conducting these interviews, an interesting thing happened. While questioning a child who was not fond of reading or books as to why he always preferred the smaller book even to be read to the class the child responded "because it wouldn't take as long." We forget that children can see the book or story as being the same but would still think the bigger the book the longer it would take to read. Luckily, this occurred early on in the interviewing so that subsequent children could be similarly questioned.

TABLE 4.7

NUMBER OF CHILDREN AND PERCENTAGES FOR CHILDREN VIEWING ONE
BOOK SIZE AS TAKING LONGER OR SHORTER TIME TO READ

| GROUP | BIG/REG | REG/MINI |
|-------------------------------------|------------|-------------|
| <u>ONLY ONE SIZE BOOK</u> | | |
| A1(BBBB) | 1 | 1 |
| A2(bbbb) | 3 | 4 |
| A5(OOOO) | 1 | 4 |
| | ===== | ===== |
| TOTAL | 5 (33.33%) | 10 (66.66%) |
| <u>BIG AND SMALL BOOKS</u> | | |
| A3(BbBb) | 2 | 1 |
| A4(bBbB) | 1 | 2 |
| | ===== | ===== |
| TOTAL | 3 (30%) | 3 (30%) |
| <u>EXPOSURE TO BIG BOOKS</u> | | |
| A1(BBBB) | 1 | 1 |
| A3(BbBb) | 2 | 1 |
| A4(bBbB) | 1 | 2 |
| | ===== | ===== |
| TOTAL | 4 (26.66%) | 4 (26.66%) |
| <u>EXPOSURE TO ONLY SMALL BOOKS</u> | | |
| A2(bbbb) | 3 | 4 |
| A5(OOOO) | 1 | 5 |
| | ===== | ===== |
| TOTAL | 4 (40%) | 9 (90%) |

Children in groups (A₃ and A₄) which used more than one size book were less likely to think a big book would take longer to read (30% < 33.33) than those children in groups using only one size book (A₁, A₂, and A₅).

A greater difference was seen for saying that a mini size book would not take less time to read. Sixty six percent of (A₁, A₂, and A₅) responded that the mini book would be faster compared to 30% of the A₃ and A₄ groups.

When regrouping for contact with a big book, children were less likely to think a big book would take longer to read (26.66% to 40%) and were much less likely to choose the mini book as being faster to read than the regular size book (26.66% to 90%) if they had been exposed to a big book.

When looking at an explanation for the effects of different combination, one possible explanation is that the reading aloud of a small book for a group of children's first hearing of a story allows the whole story to be gathered in at once and retained intact in auditory memory. When the second reading of the story is then done using a big book with its enlarged pictures and print, each child can then focus on more specific parts and make connections between the story which is now auditorially familiar including the visual pictures and print. More elements of the story can be retained because each child has had repeated opportunities to construct relationships from it on his own. The big book makes the visual information more accessible to each child in a group setting within a classroom. The child can more easily recall the auditory information thus benefitting from a "re-hearing" of the story while looking at enlarged pictures.

If the big book is used for the initial read aloud of the story in a classroom of non readers the child is attracted to the enlarged visual picture format and does not retain as much of the whole story in auditory memory since the young child can cognitively focus on only one major

dimension at a time (Piaget, 1967). Then, when the second reading is from a small book the child has more difficulty reconstructing the visual information for himself while being provided with the auditory. The auditory information is more like new information which has to be processed than a rehearing of familiar information which is then available for the child to construct relationships with.

Thus the small book followed by the big book allows the child more opportunities to form relationships because his "re-hearing" what was already stored in auditory memory allows more concentration on specific relationships of the visual to the auditory; the print speech connection.

Many repeated readings of the big book would provide the children with similar opportunities but by switching from small to big may facilitate the children's focus on first the auditory information which can then be more easily used to form relationships once the visual is provided.

The small book only used in a one to one read aloud with a child would provide the same opportunities since the child can see the visual information easily while hearing the auditory. However, when the small book alone is used in a classroom of children few if any are close enough to make use of the visual information in the pictures or especially from the print and so fewer print to speech relationships are formed. They do have repeated hearing of the story which does build the information in auditory memory. If provided with access to the book to look at individually

either after the reading time or during the reading time there again opportunities for the construction of relationships would be available as children can reconstruct the auditory when provided with the visual cues or the pictures. However, when books are not made available for rehearsal after the read aloud the best retention seems to come from the total use of big books (BBBB) or the small book followed by the big book (bBbB). The poorest performance for retention from this very small sample was from the big book followed by the small one (BbBb). Even the ones only read small books (bbbb) could recall more than (BbBb). This contradicts the quantitative results but fits with the low amount of verbalizing done by this group as shown in Appendix M.

With such a small sample and the possibility of researcher inconsistency on different days or more distractions in the hall during interviews, it cannot be considered conclusive but warrants additional research as to whether the sequence of presentation of book size for read aloud has as dramatic an effect on retention of story elements as evidenced in this study.

Card Sorting Task

Procedures

Children were shown a deck of twenty 3 x 5 cards one at a time on which letters or numbers appeared in arrangements

of words or nonwords. The children were asked to respond yes or no to the question "Is this something somebody could read?" This is an adaptation of a task used by Ferreiro and Teborosky (1982). This task occurred immediately after the quantitative CAP pretest and again following the CAP post test.

Qualitative Question #2

2. a. What criteria do kindergarten children use to determine which characters can be read or not read?
- b. Does their criteria change over a five week period of time? Are there any differences among children in the different treatment groups? (Ferreiro & Teborosky, 1982)

Statistical hypothesis:

(ABC) There will be no differences in the criteria kindergarten children use to classify characters into those which can be read and cannot be read across children, across the five week experimental period from pretest to post test, and across all treatment groups.

Research hypothesis:

(a) There will be variability in the criteria used to determine which characters can or cannot be read due to each child's internal construction of knowledge (Piaget, 1967; Ferreiro & Teborosky, 1982).

(b) There will be changes over the five week experimental period in the criteria children use to determine which characters can or cannot be read as a function of their continuous construction of knowledge.

(c) There will be more changes in the criteria used to determine which characters can or cannot be read for those groups exposed to more than one size book (BbBb) or (bBbB) than for either (BBBB) or (bbbb) or (0000) due to the increased number of relationships which can be formed between print, picture, size, book and story (Foreman & Hill, 1974).

Card Sorting Task

Discussion

As children sorted the twenty cards into "yes, this is something somebody could read." or "No, this is not something somebody could read," their actual responses as well as their reasons why were recorded. These were written down verbatim or abbreviated if a common criteria. The child was asked how they knew how to do that task so quickly and so well. Some offered ways at that point. Others did not and were requestioned with "Is there any way these are different from the other stack so that you knew these could not be read?"

In analyzing the data a vast collection of criteria were collected. These were looked at by child and by group.

Some children had a system which included all the cards and reflected some accuracy from an adult point of view. This condition was called a comprehensive system (CS). Of these children, some could do it but would offer no verbal explanation as to how. This was designated CS (comprehensive system) not stated (NS). Others with a CS could give at least one verbal criteria. This was considered stated (S). Still others gave two or more verbal criteria for their system. This was designated (S²). They will appear as:

| | |
|-------------------|--|
| CS/NS | Comprehensive system/not stated |
| CS/S | Comprehensive system/stated |
| CS/S ² | Comprehensive system/stated at least twice |

Other children had disorganized or random systems which did not include all items and had very little accuracy from an adult point of view. This was designated a disorganized system (DS). Under this category the same qualifiers for stating the criteria they used were observed. They appear as follows:

| | |
|-------------------|---|
| DS/NS | Disorganized system/not stated |
| DS/S | Disorganized system/stated |
| DS/S ² | Disorganized system/stated at least twice |

Still other children had no visible system for dealing with the task either by their responses or observation. This was designated no system (NS). In some instances the card task was not carried out and this is designated as data not available (NA). Specific examples of criteria children gave for each of the stated categories appear in Appendix G.

Table 4.8 indicates the number of children in each group which gave criteria classified in each of the classification categories on both pretest and post test.

TABLE 4.8
NUMBER OF CHILDREN BY GROUP AND CLASSIFICATION
CATEGORY FOR CARD SORTING TASK

| | COMPREHENSIVE SYSTEM | | | DISORGANIZED SYSTEM | | | NO SYSTEM | NOT AVAILABLE |
|----------|----------------------|--------|--------------|---------------------|--------|--------------|-----------|---------------|
| | NOT STATED | STATED | STATED TWICE | NOT STATED | STATED | STATED TWICE | | |
| A1(BBBB) | | | | | | | | |
| PRE | 1 | 0 | 4 | 1 | 6 | 0 | 2 | - |
| POST | 0 | 0 | 9 | 1 | 3 | 0 | 0 | 1 |
| A2(bbbb) | | | | | | | | |
| PRE | 0 | 0 | 3 | 4 | 7 | 0 | 0 | - |
| POST | 0 | 0 | 4 | 0 | 8 | 2 | 0 | - |
| A3(BbBb) | | | | | | | | |
| PRE | 0 | 1 | 2 | 2 | 8 | 0 | 1 | - |
| POST | 0 | 0 | 6 | 1 | 5 | 0 | 1 | 1 |
| A4(bBBB) | | | | | | | | |
| PRE | 1 | 0 | 2 | 5 | 7 | 0 | 0 | - |
| POST | 0 | 0 | 6 | 3 | 6 | 0 | 0 | 2 |
| A5(OOOO) | | | | | | | | |
| PRE | 1 | 0 | 5 | 5 | 1 | 0 | 2 | - |
| POST | 0 | 0 | 5 | 0 | 8 | 1 | 0 | 1 |

Discussion

There was considerable variability among the criteria children gave regarding why certain characters could or could not be read.

Seventy different criteria were reported during the pretest session. One hundred and four different criteria were reported during the post test session. These were categorized using findings of a study done by Ferreiro and

Teborosky (1982). The four main criteria and the reported percentages for their study of 63 lower and middle class four and five-year-olds from Argentina are as follows:

- 1) sufficient number of characters
57.41 percent total sample
70 percent lower class children
- 2) Variation of characters (reduced sample - 32 children)
68 percent of total sample
72.72 percent middle class
64.28 percent lower class
- 3) Utilization of cues
Three lower class children (4.76 percent)
- 4) Distinction between cursive and printed
- 5) Distinguishing letters from numbers

(Ferreiro and Teborosky. 1982, p. 33-35).

When comparing the findings of Ferreiro and Teborosky to the current study the result is shown in Table 4.9.

TABLE 4.9
COMPARISON OF CRITERIA GIVEN DURING CARD SORTING
TASK TO FERREIRO AND TEBOROSKY (1982) RESULTS

| FERREIRO AND TEBOROSKY (1982) | | CURRENT STUDY | |
|----------------------------------|---------------|---------------|--------|
| | | PRE | POST |
| 1) Sufficient # of Characters | 57.41% | 50% | 45.9% |
| 2) Variation of Characters | 68% | 50% | 57.37% |
| 3) Utilization of Cues | 4.76% | 21.42% | 26.22% |
| 4) Number | Reported Rare | 14.2% | 22.95% |

Since the cards used in the current study did not use print and cursive the fourth category of Ferreiro and Teborosky (1982) was eliminated for the current analysis. Instead, two other categories and a miscellaneous were added. The category of "someone else could read them all" was added due to the high numbers of children using this during the pretesting. Likewise a category pertaining to "words not spelled right or unable to pronounce them or others mentioning word and print convention" was added. The final category "other" enabled counting other criteria which did not fall in any of the above categories.

The total number of children actually stating criteria for each group by pretest and post test is shown below:

TABLE 4.10
NUMBER OF CHILDREN STATING CRITERIA

| | Pretest | Post test |
|-----------------|-------------|-------------|
| Group 1 BBBB | 10 | 12 |
| Group 2 bbbb | 10 | 14 |
| Group 3 BbBb | 8 | 11 |
| Group 4 bBbB | 7 | 10 |
| Group 5 0000 | 7 | 14 |
| Total | 42/70 (60%) | 61/68 89.7% |

Percentages comparing the total number of children who verbalized a criteria for the sample and by group according to the categories used by Ferreiro and Teborosky (1982) appear in Appendix H.

There were changes in the criteria used from the pretest to post test assessment. More criteria were given with 70 criteria given during pretesting compared to 104 during post testing. More children responded over time with 42 (60%) giving criteria during pretest as compared to 61 (89.70%) during the post testing.

Children usually gave different criteria or different variations of the same from pretest to post test. They were continually refining their knowledge. Ferreiro and Teborosky (1982) concur:

The idea that reading cannot take place with fewer than three letters or that repeated letters do not provide readable material or that a letter by itself becomes a number are not socially transmitted notions. (p. 57)

2. c) Are there any differences among the children in the different treatment groups?

There was a difference from pretest to post test in the number of children giving any verbal criteria and whether those criteria resulted in a comprehensive or disorganized system. Children exposed to only one size book (A_1 , A_2 , A_3) had a .56% increase in the number of comprehensive systems from pretest to post test while children exposed to two size books (A_3 , A_4) had a 19.38% increase in the number of children stating criteria that resulted in comprehensive systems. This supports the hypothesis that exposure to two size of books facilitates children's construction of knowledge about print. These results are shown in Table 4.11.

TABLE 4.11
NUMBER OF CHILDREN STATING CRITERIA IN A COMPREHENSIVE
SYSTEM OR A (DISORGANIZED SYSTEM)

| | Pretest | Post test |
|------------------------------|----------|-----------|
| Group A ₁ BBBB | 4 (6) | 9 (3) |
| Group A ₂ bbbb | 3 (7) | 4 (10) |
| Group A ₃ BbBb | 3 (5) | 7 (4) |
| Group A ₄ bBbB | 2 (5) | 4 (6) |
| Group A ₅ 0000 | 5 (2) | 5 (9) |
| Totals | 42 | 61 |
| A ₁ BBBB | 4 | 9 |
| A ₂ bbbb | 3 | 4 |
| A ₅ 0000 | <u>5</u> | <u>5</u> |
| | 12/27 | 18/40 |
| Difference = .56% | 44.4% | 45.0 |
| A ₃ BbBb | 3 | 7 |
| A ₄ bBbB | <u>2</u> | <u>4</u> |
| | 5/15 | 11/21 |
| Difference = 19.38% | 33% | 52.38% |

By looking at the children's responses from the viewpoint of the categories created by Ferreiro and Teborosky (1982) much the same shift is found with more change occurring in children exposed to two size books. Appendix K shows the totals and change for A₃ and A₄ and allows comparison to that of A₁, A₂, and A₅.

The total change indicator for BbBb (A₃) and bBbB (A₄) was 89.51 which is more than twice as large as the 35.51 which represents the total change indicator for BBBB (A₁), bbbb (A₂) and 0000 (A₅). The groups exposed to more than

one size book were more likely to make changes in their criteria from pretest to post test than those exposed to only one size book.

By comparing the number of children stating criteria resulting in comprehensive systems (Table 4.10) with the number who stated anything at all (Table 4.11) a percentage for each group for the pretest and post test results. These are shown in Table (4.12). The groups having the lowest percentage of comprehensive systems during post test were A₂ (bbbb) and A₁ (0000). Likewise they had the highest percentage of disorganized systems reported. The A₁ (BBBB) group had the highest percentage with 75% of comprehensive systems and the lowest percentage of disorganized systems. All three groups which involved the use of big books showed favorable movement toward the children constructing comprehensive systems for categorizing print as readable or not. Although those criteria are still less than correct from an adult point of view, they indicate the children are constructing knowledge about print in their own way and this is important for cognitive, social and emotional development as well as their future ability to read (Piaget, 1967, Ferreiro and Teborosky, 1982.)

TABLE 4.12
 THE PERCENTAGES OF CHILDREN STATING A CRITERIA
 DURING THE CARD SORTING TASK ACCORDING
 TO THE TYPE SYSTEM

| GROUP | DISORGANIZED SYSTEM | | COMPREHENSIVE SYSTEM | |
|----------|------------------------|--------|-------------------------|--------|
| | PRE | POST | PRE | POST |
| A1(BBBB) | 60% | 25% | 40% | 75% |
| A2(bbbb) | 70% | 71.42% | 30% | 28.57% |
| A3(BbBb) | 62.5% | 36.36% | 37.5% | 63.63% |
| A4(bBbB) | 71.42% | 60% | 28.57% | 40% |
| A5(OOOO) | 28.57% | 64.28% | 71.42% | 35.71% |

Discussion:

The results seem to support the notion that children in Wagoner, Oklahoma did construct their knowledge about print in the same way that similarly aged children constructed their knowledge in Argentina as reported by Ferreiro and Teborosky (1982). Both used criteria incorrect by adult standards confirming children's construction of knowledge

from within rather than through absorption from environment or direct social transmission.

Children did continue to refine and construct knowledge over the five week period and noticeable changes were detected. Although children do construct their knowledge slowly over time (Piaget, 1967) it is continual and ongoing and accessible by way of child interview.

The children in the different treatment groups did perform differently on the card sorting task. The groups exposed to different size books did have the most change and moved toward the formation of more comprehensive systems. The use of big books did have an effect with all groups having been exposed to them providing more criteria and being able to use that criteria in more comprehensive systems for classifying items into things which could or could not be read. Only two groups showed an increase in disorganized systems of classification. Those were groups exposed only to small books A₂ (bbbb) and A₅ (0000).

Children in A₁ (BBBB) the group exposed to only big books had the largest single increase in comprehensive systems with a 35%. A₃ (BbBb) increased 16.13% and A₄ (bBbB) increased 11.43%. A₂ (bbbb) saw a small decrease in the number of comprehensive systems with a 1.43% decrease. A₅ (0000), however, saw a decrease of 35.71% in the number of children giving criteria resulting in a comprehensive system for sorting on the card task.

Caution should be made in overgeneralization of these results. The same sampling errors with disproportionate females to males in some groups could be affecting the results of the card sorting task as it may have affected the quantitative results.

Also although the card task was designed to tap into children's construction of knowledge about print by structuring the interview, children's own unique classification systems may have been overlooked. Harste, Woodward and Burke (1984) comment:

Although we do not question their findings, we cannot accept Ferreiro and Teberosky's interpretations. Clearly, if a researcher asked you to sort a stack of cards as readable or unreadable, you would assume there were indeed two sets. Why else ask the question? In other contexts language users might make other assumptions, and the question of readable versus non-readable might never arise.

In our research we asked children to read or pretend to read a book. Under these conditions, children never once pointed out that certain print was unreadable...Thus, even when functional literacy tasks are selected for experimental purposes, the results may tell us less than we expect about natural language processes. (p. 67)

In response to Harste, Woodward and Burke (1984) The researcher would agree the readable/unreadable categories were provided for the children but the speed and ease with which they handled the task and the similarity of responses to the Argentinan sample implies that children weren't generating reasons only to satisfy the researcher but rather only sharing some of the internal ways they make sense of print all the time that adults are usually unaware of.

Videotaping

Summary of Procedures

A portable videocamera with a built-in microphone was used to video the read aloud sessions. Different positions were tried varying from directly behind the book on a tripod to hand held and with attention given to the children at certain portions of the story. The majority of read aloud sessions were videotaped resulting in five to six hours of videotape.

Question

3) Do children ask as many or more different kinds of questions when big books are used for read-aloud sessions as when small books are used? (Yaden, Smolkin and Conlon, 1989; Manning, Manning and Cody, 1988; Wells, 1986).

Research hypothesis: There will be a greater number and greater variability of types of questions asked for

groups using big books (BBBB, BbBb, bBbB) than for groups not using big books (bbbb, 0000). Since big books are designed to more closely resemble the reading which occurs naturally at home (Holdaway, 1979; Anderson, 1987) where a great deal of exchange takes place between parent and child (Yaden, Smolkin and Conlon, 1989) then more questions would be expected in the classroom as well.

Results

To determine the number of questions and comments made by children during the read-aloud sessions the video tapes of the sessions were analyzed. The researcher also kept a journal during the study and observations or key questions were noted for later review on videotape.

The first and second reading of four of the five books were chosen for analysis because more questions usually arise during the initial reading of a new book title. Only three sessions are missing from that group. They are the first and second readings of Who's in the Shed (Parkes, 1986) for A₂ (bbbb) and the first reading of that same book for A₃ (BbBb).

Videotapes were viewed and a combination of tally and actual transcription was used to analyze the results shown in Appendix M. There were more comments than questions for all groups and all books although groups and books did vary. The questions children did ask seemed to divide themselves in the same way as those identified by Anderson (1987) who

observed first grade classrooms using big books on a twice a week basis. Anderson (1987) put questions into nine different categories but found similar results in that the majority of questions centered on the illustrations and story and fewer were asked regarding about books or print. Actual transcriptions of the questions children asked by book. group and which size book was being read is shown in Appendix I.

The total number of questions asked in all sessions was 43. Of those 43, 25 (58.1%) had to do with the illustrations or story content and 16 (37.4%) concerned books or print. Of those twenty-five questions dealing with story content or illustrations, eighteen (72%) came during the reading of a big book and seven (18%) came during the reading of a small book. Of those sixteen questions which concerned books or print, eleven (68.75%) came during big book readings and five (31.25%) came during the reading of a small book.

Discussion

Children do ask more questions during sessions where big books are used. This corroborates the finding of Yaden, Smolkin and Conlon (1989) and Manning, Manning and Cody (1988) who found more questions asked during natural reading situations with children and parent. Holdaway (1979) created big books in order to recreate a more natural reading situation for children in a classroom situation.

More questions dealing with story content occurred during big book readings. Seventy two percent of the 25 questions dealing with story content came during big book readings. Of the sixteen questions generated about how books or print work, 68.75% of those occurred during big book readings.

A factor which probably affected the quality and quantity of question asking behavior by children was the intervention of the classroom teacher. Several times teachers could be heard urging children to be quiet rather than responding to the questions they asked. Big books can stimulate children's questioning but teachers have an even more powerful effect.

Compilation of Observations from Videotapes

In reviewing the hours of videotape several incidents made an impact that would not be reflected anywhere else in the data. Some involve child behavior or comments which need the whole read aloud context to make sense.

First, the children participated very quickly in the predictable parts of each book. The first book used, Crocodile Beat (Jorgensen & Mullins, 1988) has animal sounds repeated. The group using the big book (BBBB) joined in the first reading while others joined in during the second reading. All of the books had been chosen with Australian authors because of their probable lack of familiarity to children in this school district. While reading the second

book The Enormous Watermelon (Parkes and Smith, 1986) the children again were able to predict from the visual clues given by the second reading. However, in the class where the big book was read first (BBBB) one child predicted on the first reading and the researcher became worried someone had heard the book before. Both the reader and researcher had looked and read the books several times but had not cued into the visual clues given in the lower right corner as to the character who will be mentioned on the following page. Several children chimed in "Jack, Jill" just from seeing the wooden bucket turned over in the corner.

The enlarged pictures in the big book made the visual clues, added to the illustration to encourage children to predict, much more accessible than they had been in the small book. Children were focusing on the illustrations and not the print which is expected for beginning kindergarten children (Clay, 1979a).

During the fourth reading of The Enormous Watermelon (Parkes & Smith, 1986) in Group 3 (BbBb) one very quiet little girl pulled closer to the book and began chiming in with the repetitive parts. Then to no one in particular she said twice, "Its the same story!" Vygotsky (1986) and Piaget (1967) would both describe this child's comment as egocentric speech. They would disagree on whether her comment was helping to form her thoughts (Vygotsky, 1986) or merely a reflection (Piaget, 1967) of this child's newly formed equivalence correspondence (Foreman and Hill, 1984)

made between two different sizes of the same book or due to the repeated hearing of the same story (identity correspondence).

In several of the books are questions embedded in the text. When the reader would repeat them children would offer answers each time. In Who's in the Shed (Parkes, 1986) and Who Sank the Boat? (Allen, 1982) almost each page poses a question encouraging children to predict from the text and visual clues what the solution to the problem or answer to the question could be. With these books children's questions went down but their comments and discussion went up. With McBungle's African Safari (Parkes, 1987) children had more questions and comments and concern over why the character McBungle couldn't see the animals he was so close to.

During some of the book readings, teachers sometimes made comments or reminders to the children. Their comments included,

- 1) "Shhh,"
- 2) "Everyone sit back please,"
- 3) "Shh, now everyone look at the book,"
- 4) "Let's show we're ready to be good listeners."

Often comments and questions would decline following the teacher's intervention into the read aloud session. Other teacher behaviors were nonverbal and included tapping children on the back, head or shoulder and motioning for them to sit down, sit up or look at the book.

In fast forwarding the visual display on the videotapes one notices more clearly the large amount of movement that children engage in even when listening attentively. They shift positions, move arms, legs and heads and maintain a rather constant motion regardless of the book size or whether it is the first or fourth reading of a title. Yet, there does seem to be an increase in movement on repeated readings using small books. Sometimes this involves moving away, laying down or engaging in more physical contact with other children. No formal observation of these factors was conducted but it made very clear the irony of asking children to sit still.

In reviewing the tapes and counting/recording questions and comments from the first two readings of the books other than the Crocodile Beat (Jorgensen & Mullins, 1988) it became clear that some of the children's questions had gone undetected during the actual reading since no response was apparent from either reader or the other children. This was, however, the exception and most were acknowledged. It was also shown that when the reader would pause or look at the children, that is when comments were most often generated. Some of this was built into the books with questions coming at the end of the page so that comments could be made while the page was being turned. Other times it seemed to be the eye contact of the reader with the children which precipitated comments or questions from the children. The reader was consistent in looking at the

children at the end of each page regardless of the size book used.

CHAPTER V
SUMMARY AND CONCLUSION

- I. Summary
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II. Implications For Further Research

III. Conclusions

Summary

A fascination with watching young children drawn socially, emotionally, physically, and cognitively into the reading of a big book version of a good piece of children's literature is what began this study. Along with that fascination was an interest in how children use experiences to construct their own knowledge.

The Problem

The focus of this study was on the meaning children give to experiences with print. Specifically examined were the effects of using different combinations of book sizes during read aloud sessions on kindergarten children's construction of knowledge about print.

The Methods

A quantitative design was paired with a qualitative design in an attempt to get a more thorough view of what goes on during the read aloud sessions as well as what children were doing with those experiences in terms of constructing knowledge about print.

For the quantitative design a between-within two factor mixed design or split plot design (Linton and Gallo, 1975) was chosen. The between portion allowed for comparing five

different groups of children with the difference in the groups being the combination of books used during read aloud sessions. The within portion allowed comparison by group and overall on Clay's Concepts About Print Test (1979a). Sand (1972) was used for the pretest and Stones (1979b) was used for the post test. Intervening between pretest and post test were five weeks of read aloud sessions. Each week a different book title was read four times to the first four groups with two readings occurring together on Tuesday and the final two readings on Thursday. The fifth group was a control with no supplementary read aloud sessions being done. The five groups were as follows:

- | | |
|-----------------------|---|
| A ₁ (BBBB) | big book/big book - big book/big book |
| A ₂ (bbbb) | small book/small book - small book/small book |
| A ₃ (BbBb) | big book/small book - big book/small book |
| A ₄ (bBBB) | small book/big book - small book/big book |
| A ₅ (0000) | No books |

The quantitative design used five half day kindergarten classrooms which were all in the morning and represented half an entire district's population of kindergarten children. Sixty-five children (13 in five groups) were involved in the quantitative data analysis.

The qualitative study involved the same sample as the quantitative design for part and a randomly selected sub sample of five children from each group to take part in more thorough interviews. The qualitative study was comprised of a pretest and post test using a variation of twenty cards containing print that were part of a study by Ferreiro and

Teborosky (1982) in Argentina. This was done with the entire sample and involved seventy kindergarten children. Children were asked if the items were something someone could read or not read. Twenty cards were shown and then the child was asked how he knew how to do that or how he decided. Actual responses were written down and later categorized.

During the actual read aloud sessions, which were all done by the same person, a college student, videotapes were made of most sessions for later analysis. Of interest were the child and teacher behaviors as well as the questions and comments children made during the sessions.

Following the post test sessions using Stones (Clay 1979b) and the cards, the final interviews took place. Children were asked questions regarding reading behaviors and their perceptions of big books and little books as identical or equivalent (Foreman and Hill, 1984). Their preferences for book sizes for various purposes were asked as well as their ability to recall events or details from the stories read during the study read aloud sessions.

Research Questions/Results/Conclusions

Quantitative Questions

Quantitative Question #1. What impact does the use of big books alone during read-aloud sessions have on

kindergarten children's construction of knowledge about print?

Statistical hypothesis. There will be no difference in kindergarten children's construction of knowledge about print as a function of the size of book used during read-aloud sessions.

Research hypothesis. This question was addressed by comparing (BBBB) big books alone to (bbbb) small book only. A significant difference would be expected with (BBBB) showing the greater gains from pretest to post test due to the increased exposure to the connection between print and speech (Holdaway, 1979).

Results. No statistically significant differences were found by the between-within ANOVA (Linton & Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concept About Print Test (1972, 1979b) as a function of book sizes used during supplementary read aloud sessions conducted twice a week over a five week period of time. The null or statistical hypothesis failed to be rejected at the .05 level.

Quantitative Question #2. Is the repeated reading of one size book as effective as the use of two different size books in facilitating children's construction of concepts about print?

Statistical hypothesis. There will be no difference in kindergarten children's construction of knowledge about print as a function of the combination of book sizes used during read-aloud sessions.

Research hypothesis. This question will be addressed by comparing the performance of children in (BBBB) big book only and (bbbb) small book only to that of (BbBb) big/small and (bBbB) small/big. Due to the greater number of relationships children could form between print, pictures, story and book by having two different sizes presented (Foreman & Hill, 1984) either combination of sizes would be expected to be higher than any one size used alone.

Results. No statistically significant differences were found by the between-within ANOVA (Linton and Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concepts About Print Test (1972, 1979b) as a function of the combination of book sizes used during supplementary read aloud sessions conducted twice a week over a five week period of time. The null or statistical hypothesis failed to be rejected at the .05 level.

Although not statistically significant on the CAP test, differences were seen especially in the qualitative card sorting task and in children's ability to describe two different size books as equivalent or identical. Children who have been exposed to the two different size books

demonstrate a more comprehensive and organized system for categorizing print.

Quantitative Question #3. Does the order that two different size books are read aloud to children make a difference in their construction of concepts about print?

Statistical hypothesis. There will be no difference in kindergarten children's construction of knowledge about print as a function of the order in which two different size books are read during read-aloud sessions.

Research hypothesis. This question will be addressed by comparing the performance of the (BbBb) group to that of the (bBbB) group. Based on the fact that children would have heard the story during the first reading and be more aurally familiar allowing focus on the print (Holdaway, 1979) during the second and fourth readings, the small book followed by the big book (bBbB) would be expected to show the greatest gains.

Results. No statistically significant differences were found by the between-within ANOVA (Linton & Gallo, 1975) in kindergarten children's construction of knowledge about print as measured by Clay's Concepts About Print (1972, 1979b) as a function of the sequence in which different book sizes are presented during supplementary read aloud sessions conducted twice a week over a five week period of time. The

null or statistical hypothesis failed to be rejected at the .05 level.

The only aspect of the analysis which did result in statistical significance was the difference in all groups from their performance on the pretest to their performance on the post test. This finding does provide support for the position that children are constructing their knowledge continuously and that even over a short period of time such as five weeks significant differences can be detected.

Although the quantitative results were not statistically significant the trends seen from looking at the raw score means follow those predicted except that big books alone seem to have an even bigger impact on CAP scores than the combination of book sizes. It may be that considering how children construct knowledge slowly over time that a longer study covering a semester or entire school year would result in the outcome predicted at statistically significant levels.

Qualitative Questions

Qualitative Questions #1.

- (a) What meaning do children ascribe to their exposure to big books?

Research hypothesis. (a) Kindergarten children will assimilate big books into their current concepts of books and use them to construct their concepts about print.

Results

(a) Children do use their experiences with big books in a variety of ways to create meaning for themselves. This was demonstrated on the video tape by the little girl commenting to herself, "It's the same story." She was forming correspondence between different size books with the hearing of the same story. It was demonstrated by the difference in children's performance on the Concepts of Print Test, although not statistically significant. The meaning children ascribe to events or experiences is woven into their construction of knowledge and appears in a variety of ways from their book preference to their ability to see differences as well as the similarities between the same book title presented in two very different book sizes.

(b) Are they seen as equivalent or identical to the smaller version?

Research Hypothesis

(b) Following exposure to big and small books together (BbBb, or bBbB) kindergarten children will perceive them as equivalent - able to identify the similarities and differences.

No exposure to two different size books (BBBB), (bbbb) or (0000) would result in kindergarten children perceiving the two different size books as completely different,

neither equivalent or identical due to their strong focus on perceptual cues such as size (Piaget, 1967).

Results

(b) Two of the twenty-five in the final interview sample did view the two identical size copies of Beverly Cleary's The Growing Feet (1987) as different during the pretest session although none of the twenty-five children described the two identical size copies of Who's in the Shed (Parkes, 1986) as different when questioned during the final interview session. Children in groups being read two different size books were more able to verbally relate how different size books of the same title were similar as well as different. No child in the subsample of twenty-five saw the different size books as completely different reflecting a primary focus on size alone as originally projected. However, children in groups exposed to books of only one size were more likely to consider them completely alike and used comparison of the pictures as a criteria for doing so. This reflects the child still being able to consider only one aspect of the experience at a time. These same children were also more likely though to say that the larger book would take longer to read or that the very small book would be faster to read reflecting a switch back to perceptual cues without consideration for their previous answer of them being the same. This compares to Piaget's description of the five-year-old child in the preoperational stage of

cognitive thought (Piaget, 1967) in which children can consider different aspects of a situation but only one at a time and not in relation with each other.

Although speeding children through the stages is not an appropriate goal, educators do look for ways to facilitate children's passage from one stage to the other and look to provide learning encounters (Foreman and Hill, 1984) that would facilitate that process.

(c) Which version (size book) do they prefer?

Research Hypothesis

(c) Children will express criteria for preference of book size based on their exposure to different book sizes.

Results

(c) Children were able to express a preference for book size which varied according to the use (look at alone, reading vs. being read aloud to whole class). Children exposed to big books previously were more likely to prefer them for reading aloud to class (50% to 66%) and gave ease of seeing pictures or story as their criteria. They also preferred the regular size book to the mini size one for the same reasons (50% to 53.33%).

Of interest was that for looking at alone, all groups preferred the smaller book and the mini size version to the

larger format (28% to 72%). This should encourage making smaller books available for children to look at on their own following the reading of a big book to the class.

When asked which they would prefer to read the entire group was evenly split with one child unable to decide. Even those exposed to big books chose big books only 40% of the time. Between the regular and mini size version the clear favorite was the mini size version (28% to 72%).

Qualitative Question #2

- (a) What criteria do kindergarten children use to determine which characters can be read or not read?

Research Hypothesis.

(a) There will be variability in the criteria children use to determine which characters can or cannot be read due to each child's internal construction of knowledge (Piaget, 1967; Ferreiro and Teborosky, 1982).

Results.

(a) The kindergarten children in the study were able to offer verbal criteria for why they considered some of the twenty cards readable or unreadable. Most responded to why a group was unreadable rather than why a certain group was readable. Some children transformed the question into which cards they could read or not read but most offered criteria easily without deliberation. Sixty percent of the 70

children (42) gave verbal responses during the pretest and 89.7% of the 68 (61) post tested offered verbal criteria. This constituted 70 different criteria during the pretest and 104 criteria for the post test.

In analyzing the criteria they did follow the pattern detected by Ferreiro and Teborosky (1982) even though the percentages varied somewhat. Still the most often category given was variation of character for both studies followed by sufficient number of characters for both studies. Less often used was the utilization of some subjective cue within the word or letter ("that's in my name") and least often used for both studies was differentiations of numbers from letters. Considering the difference in the cards from Spanish to English, from cursive and print to only upper and lower case print, and the difference in time and culture the similarities are more remarkable than the differences.

(b) Does their criteria change over a five week period of time?

Research Hypothesis

(b) There will be changes over the five week experimental period in the criteria children use to determine which characters can or cannot be read as a function of their continuous construction of knowledge.

Results

Ferreiro and Teborosky (1982) used the cards as only one aspect of assessing children's literacy behaviors before school and used the results to help formulate different levels of construction that children go through on their way to standard adult views of print and books both written and read. For this study too the criteria were looked at according to the number of criteria stated and the movement toward a comprehensive system of classification which could include consistency among all cards and in some ways movement toward standard adult thought although internal consistency was more important.

A greater number of children responded verbally on the post test rather than on the pretest. Children gave more and a wider variety of criteria for why they sorted the cards as they did on the post test than on the pretest. A greater number of children gave criteria that were part of a comprehensive system on the post test than on the pretest.

(c) Are there any differences among children in the different treatment groups? (Ferreiro and Teborosky, 1982).

Research Hypothesis

(c) There will be more changes in the criteria used to determine which characters can or cannot be read for those groups exposed to more than one size book (BbBb) or (bBbB)

than for either (BBBB) or (bbbb) or (0000) due to the increased number of relationships which can be formed between print, picture, size, book and story (Foreman and Hill, 1974).

Results

On the basis of this analysis it was found that children in groups exposed to different size books during read aloud made more changes in their criteria from pretest to post test and that these changes were in a positive direction. The difference between pretest and post test regarding the percentage of children who responded offering criteria as part of a comprehensive system was .56% for those groups using only one size book and 19.38% for those groups using two different size books. Caution should be offered because actual numbers are low but the differences are there.

Qualitative Question #3. Do children ask as many or more different kinds of questions when big books are used for read-aloud sessions as when small books are used? (Yaden, Smolkin & Conlon, 1989; Manning, Manning and Cody, 1988; Wells, 1986).

Research Hypothesis. There will be a greater number and greater variability of type of questions asked for groups using big books (BBBB, BbBb, bBbB) than for groups not using big books (bbbb, 0000). Since big books are designed to more closely resemble the reading which occurs naturally at

home (Holdaway, 1979): Anderson, 1987) where a great deal of exchange takes place between parent and child (Yaden, Smolkin and Conlon, 1989) then more questions would be expected in the classroom as well.

Results. Children do ask more questions and more varied types of questions during the read-aloud sessions using big books no matter whether the big book is read first or second in combination with small books or for both readings. An average of two questions per session were asked during the reading of big books as compared to .9 questions per session while reading small books.

Questions fell into two main categories. Those concerned with the illustrations or content of the story and those centering on how books or print function. From a total of forty-three questions asked during the first and second readings of four books, twenty-five dealt with illustrations or story content and sixteen concerned how books or print work. Of those twenty-five questions or illustrations on the story, eighteen (72%) occurred during the reading of a big book compared to seven (18%) which came during the reading of a small book. Of sixteen questions concerning how books or print work, eleven (68.75%) came during the reading of a big book compared to five (31.25%) which occurred during the reading of a small book.

Teacher intervention and teacher definition of appropriate read-aloud behavior for children seemed to alter the number of questions and comments children made.

More frequent than questions were comments. All groups made comments but of the 639 recorded, 376 or 58.84% occurred during the reading of a big book and 263 or 41.15% occurred during the reading of a small book. Here again teacher attitude and behaviors played a part as well as specific book title and content but still the trend both with questions and comments favors the big book. This supports the findings of Holdaway (1970) and Anderson (1987) who saw big books as creating a more natural relaxed reading environment similar to that found at home where Yaden, Smolkin and Conlon (1989), Manning, Manning and Cody (1988) and Wells (1984) found children asking frequent questions and making comments ongoing throughout the read aloud session. Yaden, Smolkin and Conlon (1989) speculate that it may be this increased opportunity for exchange between parent and child as much as the exposure to print that makes the read-aloud so beneficial (Trelease, 1985). This would mean that not only should big books be read but the teacher must foster and facilitate children's questioning, comment making and exchange of points of view to truly maximize the learning encounter.

Looking at combination of book size and its effect on questioning or commenting behavior there was a total of 312 comments or an average of 20.8 per session or 177 for those

sessions with big books or an average of 25.28 per reading with a big book. The highest per session was in this group with 53 comments and eight questions during the second reading of McBungle's African Safari (Parkes, 1987) using a big book. Nineteen questions came from groups A₃ and A₄ with twelve of them coming during big book sessions. Comparing this to groups A₁ and A₂, found 327 comments made for an average of 23.35 per session and 24 questions for an average of 1.7 per session but the highest number in this came with the second reading of Parkes' McBungle's African Safari (Parkes, 1987) with six questions asked and 41 comments made.

Teacher influence on verbal behavior of the children and the presence of a big book seem the biggest factors contributing to children's comments and questions. For this sample, reading the big book second made more of a difference than which size book was read first. This would follow the writings of Holdaway (1979) and Trelease (1985) reporting the benefits of repeated read-alouds to the building of children's concepts of story, book and print.

In looking at where the questions regarding story, books and print occur, 13 of the 16 came during the second reading of the book and eleven of the 16 came during the reading of big books. This would imply that in reading either a small or big book it should be repeated and the big book should be read second if a combination of the two are being used.

Implications for Further Research

More investigation is needed into the benefits of using **big books with young children** for the social, emotional and cognitive reasons of promoting more comments and questions and exchanges of points of view as well as facilitating children's construction of concepts of story, books and print.

The combination of book sizes did have a positive effect on children being able to see not only big and small books but also regular and mini books as equivalent rather than only different or only the same. The subsample involved with that aspect of the study was so small that additional research with a larger sample is needed before a combination of book sizes can be said to be definitively better than only big books. All combinations using big book did better though than the control or small book only. In the meantime I would recommend using various sizes of the same book as well as allowing children to represent the books in a variety of ways such as a classmade big book, dramatic play, and written or visual arts. By allowing children their own unique response to books you are **encouraging their symbolic representation** (Raines, 1990) and facilitating their construction of knowledge. By leaving it open-ended you are respecting the child's ability to think of responses alternative to our own and moving teaching to a more child centered perspective (Castle, 1989).

More research is needed with minority populations to see if the gains found in the current study of Clay's CAP test hold true for larger numbers of male and female minority students. It may be that the increased visual format of shared reading with big books which models the reading process combined with shared writing which models the writing process could result in substantial gains for minority children.

Interviewing children warrants more use in educational research and within classrooms as well. So much of what and how a child processes in the world is lost if adults do not bother to ask and listen. Egocentrism (Piaget, 1967) is not unique to children for many adults assume that if nothing is said everyone thinks the way they do. Children are the only credible source regarding their own thinking and a more accurate assessment than standardized tests (Kamii, 1990).

Videotaping is an available resource to teachers and researchers and captures details which during actual taping go unnoticed. It should be made more easily available to teachers to monitor their own behavior and to provide insight into their classroom behaviors. It provides valuable information regarding individual children and their interactions with others. Of special interest for more research would be those verbal and nonverbal behaviors which teachers do to facilitate children's questions, comments and exchange of points of view. More research is needed into the effects of reading a big book for the second reading of

read-aloud on children's questioning and comments. We know children benefit from repeated read alouds in the home (Trelease, 1985) and that the richest information comes during the repeated readings (Holdaway, 1979) so it follows that the big book would make the print and story more accessible on those repeated readings.

The read aloud time should not be one of controlled silence but rather a dynamic learning encounter where children interact with the teacher, book, story, print and the thoughts and opinions of the other children. It is a wonderful opportunity to model reading strategies of prediction, sampling phonetic and visual cues and then confirmation (Weaver, 1988; Combs, 1987) which all proficient readers use. It is a safe environment for heated discussions revolving around Who Sank the Boat? (Allen, 1982) or Who's in the Shed? (Parkes, 1986).

The card sorting task first developed by Ferreiro and Teborosky (1982) holds many possibilities for further research. Taking into account the criticism by Harste, Woodward and Burke (1984) children could be asked to group the twenty cards in any way they choose. Would readable and nonreadable groups result or would they instead find other categories more reflective of their own unique construction of knowledge? When do those unique constructions become reconstructed so that more complex reading can take place? If their criteria do not wane would not that make reading instruction very confusing and conflicting to their own

knowledge? Is increased exposure to books and print as well as opportunities to interact with them a necessary prerequisite for a child modifying his criteria, constructing new knowledge, or is it mainly developmental occurring with minimal interaction from the environment? What is the precipitator for enough cognitive dissonance (Foreman and Hill, 1984) to result in children's reconstructing their knowledge regarding books and print? Could a series of big book experiences facilitate that reconstruction? More research is needed to answer some of the above questions and in order to generate even more interesting and vital ones regarding children's construction of knowledge.

Piaget (1974) described a learning environment as warm and supportive where children are mentally active and allowed to exchange points of view (1974). Educators recognize children's need to be physically active but neglect the fact that mental activity is the necessary ingredient for thinking and construction of knowledge. The read aloud sessions videotaped were wonderful examples of warm, supportive environments where children were actively engaged in exchanging points of view as a result of experience and interaction with a book. That common experience can pull a group together as it provides the source for additional activities (Raines and Canady, 1989) and discussion which can be built into other common experiences. Each child may go away with something

different from the experience but there are aspects shared with the group in common.

Conclusion

CAP may very well be tapping not the sense/meaning or knowledge children are constructing about print in their environment but rather the amount of their prior exposure to social knowledge regarding reading and books or social conventions of print. Thus it would follow that higher SES children who tend to have more access to printed material at home would score higher. What was striking during the assessments was the contrast between the child who scored very low on the CAP but had a very comprehensive system with which he/she was making sense out of print or determining which ones were worthy of further attention. These children were not "deficient" in thinking skills or in their ability to construct knowledge and meaning from what was around them. Yet based on their CAP score they could be targeted as in line for future reading difficulties. When in fact all they might be "deficient" in was prior exposure to printed material and seeing the reading and writing process modeled as authentic and functional by a significant adult. Perhaps the CAP is more of an assessment of a child's environment rather than the child and rather than the child's ability to make meaning from the environment. It is a measure of social knowledge at one point in time not the child's ability to benefit from future experiences. to

gather additional social and physical knowledge and certainly not a measure of that child's logico-mathematical knowledge regarding the world of print. The CAP test implies one and only one way for children to process print and is not sensitive to the unique ways young children progressively construct knowledge about print before reaching adult standard ideas. The CAP scores provide insight into a child's prior exposure to books and print and would indicate a need for a print rich environment where reading and writing is functional and authentic while being integrated throughout the school environment and carried over to home. But then such a developmentally appropriate environment is desired for all young children (Bredekamp, 1989). The lower score would indicate that formal reading instruction with a focus on isolated skills and letter sounds would be inappropriate for that is not how the child is currently making sense of print nor are those things the next step in the sequence (Ferreiro and Teberosky, 1982). By doing both the CAP and the card task with children a contrast can be seen in their social knowledge of print and their logico-mathematical knowledge regarding print. Other assessments are being developed (Linda Harris, personal communication, February 16, 1990; Kamii, 1990) which may be able to tap both aspects in a more unobtrusive, efficient manner. Until then professionals need to know the limitations of their assessments and not diagnose or place

children based on assessments which tap predominantly social knowledge (Kamii, 1990).

On the other hand there were other children who scored much higher on the CAP but who could not indicate or tell any means for sorting the characters into readable or non readable. Some had obviously had prior experience with flash cards because they would rub their palms together, chew on their lips and try to look very hard at each one in an effort to "see" the answer or read each card either as a whole word or character by character. For these children they sensed there was one right answer and felt themselves already lacking.

These children had been exposed perhaps even over exposed to the social knowledge regarding books and print. They had been taught to say things which didn't make any sense to them. This premature injection of purely abstract social knowledge could cause them to discredit their own internal system for how print words. By turning off that system, print books and writing become a haphazard system that does not make sense. This may result in children who can execute the mechanics necessary to read but without deriving meaning. They have long since forgotten such things were supposed to make sense. The toll on their ability to read may only be second to their loss of a sense of autonomy (Piaget, 1965; Kamii, 1985, 1989, 1990). Both losses are devastating in our society. For once a child loses the ability to assess situations and draw conclusions

based upon his own constructed knowledge he is doomed to trying to remember the right answers long after the questions have changed.

Both the child with low social knowledge but who is still constructing his own logico-mathematical and the child with high social knowledge but low logico-mathematical will have problems in our public schools as they are currently structured. The first will be diagnosed as having problems since their prior exposure and thinking deviates from the standard. As they progress through an isolated skills curriculum they will either become like child number two and doubt their own thinking or remain autonomous but either way they will fall further behind not from their thinking ability but from things they lacked when they entered the system (print experiences) and from our school systems lack of sensitivity and flexibility to do anything to help them or to meet their needs.

Child number two is learning what we are teaching and may even do adequately in school but has low self esteem and lacks higher reasoning abilities. This child becomes the passive learner doing as asked and thinking very little. The schools clone this child's thinking to everyone else and systematically remove creativity, reflective thinking or reasoning. The school has failed this child as well for not developing the potential of thought processes which he/she possesses or rehabilitating him/her from the effects of pushing academic social knowledge too soon. This child can

act. read and make decisions without meaning or serious thought.

Piaget urged the goal of education to be the development of creative thinkers (1974). How can either of the two children described meet that goal? Parents, schools and governments need to share in the responsibilities of meeting that goal if our society is to flourish, prosper and continue.

Parents need to provide loving supportive creative environments for their children where questions and thinking are modeled and encouraged. When care occurs outside the home the quality of interaction between child and caregiver should be of ultimate importance followed by a safe stimulating environment which encourages children to discover, manipulate and exchange materials and ideas.

Schools should focus on providing environments based on mutual respect and the facilitation of a child's own construction of knowledge rather than being so eager to pass on the world's read-made truths. Structure can be provided but within an authentic, integrated and caring atmosphere. Governments need to share in the cost of providing the level of quality care necessary to insure the next generation being ready to face the challenges it will meet in all aspects of life. Adequate funding and support are needed for:

- 1) families to provide or find quality care for their children:

2) Training, education and salaries for professional educators from day care to higher education who know the difference between social, physical and logico-mathematical knowledge and know how to facilitate the development of all three:

3) making creative arts accessible to all people to both view and produce themselves.

Libraries, museums, concerts and facilities as well as basic materials for music or art production, reading and writing should not be exclusively in the hands of the elite. For creativity fosters thinking and vice versa. Schools need real books of quality and interest to children before reading becomes authentic or meaningful.

Big books are seen as one way of trying to fill the gap for those children who have not had quantities of experience with being read aloud to at home with favorite books of their own choosing by a significant adult. By having the teacher model reading and writing as a real and purposeful event within the classroom, as well as modeling reading behaviors and strategies (Combs, 1987) with big books, children who are already very capable of making sense out of their world will have the social knowledge about books and print that they are lacking made very accessible so that they too can learn how books work. Hopefully shared book reading (Holdaway, 1979) procedures which include big and small books provide children access to information which they can then use to construct further knowledge. This

informal relaxed way of sharing the conventions of print with several children hopefully allows children to gradually modify their own thinking rather than making them feel inadequate or deficient at any point in time. By modeling reading and writing in real ways and then encouraging children's own reading and writing according to their own current systems (pretend reading behavior or invented spelling) children are allowed to continue to value their own systems that they came to school with. This helps build on their already constructed knowledge but also facilitates their sense of autonomy.

Quality big books allow an experience with a book to be more easily shared together (Holdaway, 1979). This provides a common experience which can be shared between the child who has no books at home and is rarely read to and the child who has been read to since birth. Unlike sharing a worksheet experience, an appropriate read-aloud session with a good book is open ended enough to allow each to ask questions on his appropriate level, to construct whatever meaning is appropriate and through social exchange to safely confront others' points of view while still being respected for his own. From the perspective of Vygotsky (1986) how teachers model questioning, predicting and confirming during read aloud will become the child's inner speech when he later reads silently. Piaget (1967) would look at the child's construction of knowledge, schemas regarding books

and print through the social interchange and access to print which can then be used anywhere.

Through the use of big books access to information about books, story and print is made easily accessible to be used by the child as he/she are ready for it. This implies teachers cannot second guess each child's pace of development but rather must keep the information accessible in non threatening ways and trust the child to make use of it when he is ready. This is similar to how children learn to speak (Schickendanz, 1987). We do not wait to talk to our children until they can speak neither should we wait to model print or read to them until they are able to read. Likewise, do we not quit talking to them once they are proficient speakers. We should also not quit modeling print or sharing good books once they can read and write. Representation of knowledge should be a lifelong adventure during which we continually strive to make more sense of the world.

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APPENDIX A
PARENT PERMISSION FORM

Dear Kindergarten parents,

During the first semester of the 1989-90 school year Kay Grant, Early Childhood instructor at NSU, will be conducting her doctoral dissertation research for Oklahoma State University with the _____ Public School kindergarten classes. This project will be looking at the effects of using different size books during read-aloud time on children's development of concepts about print. During this five week study, a researcher will come into the classroom and read good children's books aloud to the group.

Special care will be taken to insure that all information gathered on each child remains confidential during the project and in the reporting of the results. This study will provide information so that teachers can better help young children form their concepts of print and benefit from the read-aloud time. All books will be newly purchased for this project and represent examples of good children's literature. Following the research study these materials will be made available to all the kindergarten classes, teachers and children.

Your cooperation in this project is appreciated. Involvement is completely voluntary and there will be no penalty for refusal to participate and you may withdraw by notifying the project director.

Sincerely,

Kay Lallier Grant

I, _____, give my permission for my child _____ to participate in the research study outlined above.

- | | | |
|-----|----|---|
| YES | NO | I give permission for my child to be tape recorded, videotaped or photographed for purposes of observation during this study. |
| YES | NO | I give permission for these tape recordings videotapes or photographs to be used for educational presentations or publication. |
| YES | NO | I give permission for the child's teacher and school to have access to my child's results on assessments made during this study for purposes of educational planning. |

DATE

SIGNATURE

APPENDIX B
CONCEPTS ABOUT PRINT PROTOCOL

CONCEPTS ABOUT PRINT SCORE SHEET

Name: _____ Age: _____ Date: _____
 Recorder: _____ Date of Birth: _____ TEST SCORE:
 STANINE GROUP:

| PAGE | SCORE | ITEM | COMMENT |
|-------|-------|--|---------|
| Cover | | 1.Front of book | |
| 2/3 | | 2 Print contains message | |
| 4/5 | | 3 Where to start | |
| 4/5 | | 4.Which way to go | |
| 4/5 | | 5 Return sweep to left | |
| 4/5 | | 6.Word by word matching | |
| 6 | | 7.First and last concept | |
| 7 | | 8 Bottom of picture | |
| 8/9 | | 9.Begin 'The' (Sand) or 'I' (Stones) bottom line, top OR turn book | |
| 10/11 | | 10.Line order altered | |
| 12/13 | | 11.Left page before right | |
| 12/13 | | 12 One change in word order | |
| 12/13 | | 13.One change in letter order | |
| 14/15 | | 14 One change in letter order | |
| 14/15 | | 15 Meaning of ? | |
| 16/17 | | 16 Meaning of full stop | |
| 16/17 | | 17.Meaning of comma | |
| 16/17 | | 18 Meaning of quotation marks | |
| 16/17 | | 19.Locate M m H h (Sand) OR T t B b (Stones) | |
| 18/19 | | 20 Reversible words was, no | |
| 20 | | 21.One letter. two letters | |
| 20 | | 22.One word: two words | |
| 20 | | 23.First and last letter of word | |
| 20 | | 24 Capital letter | |

APPENDIX C
INTERVIEW FORM

APPENDIX C

INTERVIEW FORM

1. A. Do you like to read books?
 - B. 1) What is your favorite book to read?
 - 2) What is your favorite book to look at?
 - 3) What is your favorite to have read to you.
 - C. 1) Does someone read to you at another place besides school?
 - 2) Who?
 - 3) Where?
 - 4) When?
 - D. Do you have books of your very own at home?
 - E. 1) Have you ever gone to a library or a place that had lots of books?
 - 2) What did you do there?
 - F. What do you like to do most with books?
2. Show two different size books
 - A. What can you tell me about these books?
 - B. What would it be like to hear this story and then to hear this one?
 - C. Is this the same book?
 - D. Is this the same story?
 - E. How could we find out?

- 0 F. How could we be sure?
- G. Which book would you like to read?
- H. Which one would you like to look at on your own?
- I. Which one would you like to have read to your class?
3. Show two different size books
- A. What can you tell me about these books?
- B. What would it be like to hear this story and then to hear this one?
- C. Is this the same book?
- D. Is this the same story?
- E. How could we find out?
- F. How could we be sure?
- G. Which book would you like to read?
- H. Which one would you like to look at on your own?
- I. Which one would you like to have read to your class?
4. Show two different size books
- A. What can you tell me about these books?
- B. What would it be like to hear this story and then to hear this one?
- C. Is this the same book?
- D. Is this the same story?
- E. How could we find out?
- F. How could we be sure?
- G. Which book would you like to read?
- H. Which one would you like to look at on your own?
- I. Which one would you like to have read to your class?

APPENDIX D

EXAMPLE OF CARDS USED FOR CARD SORTING TASK

S S S S S S S

45

out

APPENDIX E
FINAL INTERVIEW RESULTS

APPENDIX E

FINAL INTERVIEW RESULTS

A₁ BBBB A₂ bbbb A₃ BbBb A₄ bBbB A₅ 0000

Questions

| | | | | | | |
|---|-------|---|---|---|---|---|
| 1. Like to read? | DK | 2 | | 1 | | 1 |
| | Y | 3 | 4 | 3 | 5 | 4 |
| | N | | 1 | 1 | | |
| 2. (a) named favorite book to read. | Y | 3 | 5 | 5 | 4 | 3 |
| | N | 2 | | | 1 | 2 |
| (b) named favorite book to look at | Y | 4 | 4 | 5 | 5 | 4 |
| | N | 1 | 1 | | | 1 |
| (c) named favorite book to be read to you | Y | 4 | 4 | 5 | 4 | 3 |
| | N | 1 | 1 | | 1 | 3 |
| (d) all different | Y | 4 | 3 | 3 | 3 | 4 |
| | N | 1 | 2 | 2 | 2 | 1 |
| 3. (a) Someone read to you? | Y | 4 | 5 | 5 | 4 | 5 |
| | N | 1 | | | 1 | |
| (b) Can say who | Y | 4 | 5 | 5 | 4 | 5 |
| | N | 1 | | | 1 | |
| (c) Can say where | Y | 4 | 5 | 5 | 4 | 5 |
| | N | 1 | | | 1 | |
| (d) Can saw when | Y | 4 | 5 | 5 | 4 | 5 |
| | N | 1 | | | 1 | |
| 4. Have books of own at home? | Y | 4 | 5 | 5 | 4 | 5 |
| | N | 1 | | | 1 | |
| 5. Been to place with lots of books | Y | 5 | 2 | 3 | 3 | 2 |
| | N | | 3 | 2 | 2 | 3 |
| 6. What do you enjoy doing with books? | Read | 1 | 2 | 4 | 2 | 2 |
| | Look | 3 | 3 | 1 | 1 | 3 |
| | Buy | 1 | | | | |
| | Other | | | | | |
| | Play | | | | 2 | |

APPENDIX F

ACTUAL EXAMPLES OF REASONS GIVEN FOR BOOK SIZE PREFERENCE

APPENDIX F

ACTUAL EXAMPLES OF REASONS GIVEN FOR BOOK SIZE PREFERENCE

| | <u>Preference</u> | <u>Reason</u> |
|---------|-------------------|--|
| Group 1 | 1) | Big - So everyone could see the pages better |
| | 2) | Small - the big one would take up all the room |
| | 3) | Small - It wouldn't be so hard to handle |
| | 4) | Big - Cause its big and you can look at the pages better |
| | 5) | Big - the other kids could see it better |
| Group 2 | 1) | Little - Cause its easy to read |
| | 2) | Little - Wouldn't take up so much time |
| | 3) | Big - It would be easier to read - it has bigger letters |
| | 4) | Big - no particular reason |
| | 5) | Little - It would be faster to read |
| Group 3 | 1) | Big - Because you could see the words better |
| | 2) | Little - because it would be faster |
| | 3) | I'd like big and little both but if only one-big |
| | 4) | Little - Because its small and they could see it better |
| | 5) | Big - I don't know |
| Group 4 | 1) | Little - I don't know |
| | 2) | Mini - Cause its so little |
| | 3) | Big - It would be fun |
| | 4) | I'd like you to bring them both |
| | 5) | Big - so we could see the big pages |
| Group 5 | 1) | Regular size - Because its bigger and the class can look at it |
| | 2) | Big - Cause its bigger and you could see the pictures better |
| | 3) | Big - Cause its big |
| | 4) | Big - that one's more bigger |
| | 5) | Big - So everyone could read it |

APPENDIX G
ACTUAL CHILD EXAMPLES FOR EACH OF THE CLASSIFICATION
CATEGORIES ON THE CARD SORTING TASK

APPENDIX G

ACTUAL CHILD EXAMPLES FOR EACH OF THE CLASSIFICATION
CATEGORIES ON THE CARD SORTING TASK

Group A₁ Sub # (8)

Sand 8

Stones 7 Disorganized System/Stated

Child sorted out as "things which can't be read": 5.9.
A. S. I. the, it. on. re. ee, ssssss. mmmm and AAAAA.

The only criteria given was regarding the last three.
The child said "got too many of them."

Rationale for category classification: Not all single character cards were chosen (nine was placed in other pile.) Only "the" was chosen of those having three characters. All two character items except "45" were designated as not being able to read.

Group A₂ Sub # (5)

Sand 8

Stones 6 Disorganized System/Stated Twice

Child sorted out A, MMMM, SSSSSS and AAAAA as those which couldn't be read. Two criteria were given. "There's only one letter." and "They're all the same."

Rationale:

This is considered a partial system showing signs of organization. The child did not sort out all single character items although did sort out all cards with more than two repeated characters.

Group A, Sub # (13)

Sand 4

Stones 2 Disorganized System/Not Stated

The child sorted out "the and it" as not being able to be read and showed me a variety of number of fingers for each of the other cards as if they were all numbers to be represented. No verbal explanation was given.

Rationale:

The responses were inappropriate for question although child was constructing his own meaning for the task.

Group A, Sub # (8)

Sand 13

Stones 12 Comprehensive System/Stated

Child sorted out only DTSZ as not being able to be read. The criterion given was that it "has different letters."

Rationale:

Child chose only item with nonstandard letter patterns for English.

Group A, Sub # (5)

Sand 2

Stones 2 Comprehensive System/Stated Twice

Child sorted out the following as "those which can't be read": S. A. I. 9. 2, on, it. 45. re. ee.

The criterion the child provided: "There's only one or two and you need more to read it."

Rationale:

The child's system is comprehensive in that all single and double character items are included.

Group A, Sub # (2)

Sand 7

Stones 5: Comprehensive System/Not Stated

Child sorted out the following as "those which can't be read": S. 9. I. A. 2. on, it. re, ee. out. the. and DTSZ. No verbal explanation is given.

Rationale:

This child grouped all single character items and all double character items except for 45 as not able to be read. All triple character items except for MOM as well as DTSZ were also sorted out. The child has a more comprehensive system.

Group A, Sub # (2)

Sand 4 NS

Stones 9 DS/S Not Stated

Child sorted out the following as "those which can't be read": Mom, call. out. MMMM, COMPANY, 2. No verbal criterion was given.

Rationale:

No visible system was apparent.

APPENDIX H
COMPARING THE TOTAL NUMBER OF CHILDREN WHO VERBALIZED
A CRITERIA FOR THE SAMPLE AND BY GROUP ACCORDING
TO THE CATEGORIES USED BY FERREIRO
AND TEBOROSKY (1982)

APPENDIX H

COMPARING THE TOTAL NUMBER OF CHILDREN WHO VERBALIZED
 A CRITERIA FOR THE SAMPLE AND BY GROUP ACCORDING
 TO THE CATEGORIES USED BY FERREIRO
 AND TEBOROSKY (1982)

1) Sufficient number of characters

| | | Pretest | Post test |
|--------------|---|---------|-----------|
| Total sample | | 50% | 45.90% |
| Group | 1 | 50% | 91.66% |
| | 2 | 40% | 35.71% |
| | 3 | 50% | 72.72% |
| | 4 | 42.85% | 10% |
| | 5 | 71.42% | 21.42% |

2) Variation of characters

| | | Pretest | Post test |
|--------------|---|---------|-----------|
| Total sample | | 50% | 57.37% |
| Group | 1 | 60% | 83.33% |
| | 2 | 40% | 57.14% |
| | 3 | 50% | 45.45% |
| | 4 | 42.85% | 70% |
| | 5 | 57.14% | 42.85% |

3) Utilization of Subjective Cues

| | | Pretest | Post test |
|--------------|---|---------|-----------|
| Total sample | | 21.42% | 26.22% |
| Group | 1 | 1% | 0% |
| | 2 | 40% | 28.5% |
| | 3 | 37.5% | 9% |
| | 4 | 14.2% | 60% |
| | 5 | 0% | 35.7% |

4) Number vs. Letters

| | Pretest | Post test |
|--------------|---------|-----------|
| Total sample | 14.2% | 22.95% |
| Group 1 | 1% | 33% |
| 2 | 30% | 21.42% |
| 3 | 0% | 18.18% |
| 4 | 0% | 30% |
| 5 | 28.57% | 14.28% |

5) Someone Else Could Read Them

| | Pretest | Post test |
|--------------|---------|-----------|
| Total sample | 19.04% | 3.27% |
| Group 1 | 30% | 8.333% |
| 2 | 0% | 7.14% |
| 3 | 12.5% | 0% |
| 4 | 57.14% | 0% |
| 5 | 0% | 0% |

6) Aren't Words/Spelled Correctly Etc.

| | Pretest | Post test |
|--------------|---------|-----------|
| Total sample | 9.52% | 22.95% |
| Group 1 | 0% | 8.33% |
| 2 | 10% | 14.28% |
| 3 | 12.5% | 54.54% |
| 4 | 14.28% | 10% |
| 5 | 14.28% | 21.42% |

7) Other

| | Pretest | Post test |
|--------------|---------|-----------|
| Total sample | 2.38% | 6.55% |
| Group 1 | 0% | 7.14% |
| 2 | 0% | 0% |
| 3 | 12.5% | 18.18% |
| 4 | 0% | 0% |
| 5 | 0% | 7.14% |

APPENDIX I
ACTUAL TRANSCRIPTIONS OF THE QUESTIONS CHILDREN
ASKED DURING READ ALOUD SESSIONS

APPENDIX I

ACTUAL TRANSCRIPTIONS OF THE QUESTIONS CHILDREN

ASKED DURING READ ALOUD SESSIONS

Enormous Watermelon

bbbb What's the top say? B/P
 bBbB Where did that big book come from? B/P
 bBbB Who's Mother Hubbard? C
 BBBB Could they pull it? C
 BBBB They pulled it? C
 BBBB Really? C
 BbBb What that say? B/P

McBungle's African Safari

bbbb Will you read it again? B/P
 bBbB Can't he see them? C
 bBbB Where are they? C
 bBbB Where? C
 bBbB You have a big book too don't you? B/P
 bBbB Brenda Parks? B/P
 bBbB Where's the others go? C
 bBbB Who's out? C
 bBbB What was that house? C
 bBbB Know why he can't see them? C
 bBbB Is he blind? C
 bBbB Where's the foot prints? C
 Bbbb Where's a monkey? C
 BBBB What does this say? B/P
 BBBB What does that say? B/P
 BBBB Did you miss that part last time? B/P
 BBBB Where? C
 BBBB What does McBungle mean? C
 BbBb None

Who Sank the Boat?

bbbb Pamela Allen? B/P
 bbbb Can we eat? Other
 bbbb Who? C
 bbbb Read it again? B/P
 bbbb None
 BbBb None
 bBbB Where's the? C

bBbB How can it jump? C
 bBbB How can the mouse sink the boat? C
 bBbB What if it was in the ocean? They could have had a
 hurricane. C
 BBBB Nothing to read on this one? B/P
 BBBB What's that bottom one right down there? B/P
 BBBB What's that? B/P
 BBBB They're not supposed to, right? C

Who's in the Shed

BbBb Not Available
 BbBb None
 BBBB I wonder what it is? C
 BBBB Read it again? B/P
 BBBB Where's the mouse? C
 BBBB Read it again? B/P
 bBbB Why?
 bBbB Was the bear inside the shed? C
 bBbB None
 bbbb Not Available
 bbbb Not Available

APPENDIX J
SUMMARY OF RAW SCORES BY SEX,
MINORITY AND A COMBINATION OF BOTH

| GROUP | CAP SCORE MEANS BY GROUP FOR SEX | | | | | |
|--------|----------------------------------|-----------|------------------------|---------|-----------|------------------------|
| | FEMALES | | | MALES | | |
| | PRETEST | POST TEST | DIFFERENCE PRE TO POST | PRETEST | POST TEST | DIFFERENCE PRE TO POST |
| A1 | | | | | | |
| BBBB | 7.09 | 9.54 | +2.45 | 5.0 | 9.0 | +4.0 |
| A2 | | | | | | |
| bbbb | 8.16 | 7.66 | -.5 | 5.87 | 7.12 | +1.25 |
| A3 | | | | | | |
| Bbbb | 9.44 | 9.87 | -.56 | 8.25 | 9.50 | +1.25 |
| A4 | | | | | | |
| bBbB | 5.85 | 5.85 | 0 | 8.25 | 9.50 | +1.16 |
| A5 | | | | | | |
| 0000 | 6.33 | 5.85 | -.48 | 6.0 | 6.6 | +.6 |
| TOTALS | 7.37 | 7.55 | +.18 | 6.52 | 8.17 | +1.65 |

| GROUP | CAP SCORE MEANS BY GROUP FOR MINORITY AND NON-MINORITY | | | | | |
|--------|--|------|-------|--------------|------|-------|
| | MINORITY | | | NON-MINORITY | | |
| A1 | | | | | | |
| BBBB | 3.0 | 6.5 | +3.5 | 7.25 | 9.91 | +2.66 |
| A2 | | | | | | |
| bbbb | 8.5 | 8.16 | -.33 | 6.42 | 7.71 | +1.28 |
| A3 | | | | | | |
| Bbbb | 7.28 | 7.85 | +.57 | 7.66 | 9.0 | +1.34 |
| A4 | | | | | | |
| bBbB | 4.33 | 5.0 | +2.17 | 7.0 | 7.75 | +.75 |
| TOTALS | 5.65 | 6.96 | +1.31 | 7.12 | 8.43 | +1.30 |

| GROUP | CAP SCORE MEANS BY MINORITY FEMALES AND MALES | | | | | |
|--------|---|------|------|----------------|--------|-------|
| | MINORITY FEMALES | | | MINORITY MALES | | |
| A1 | | | | | | |
| BBBB | 3.0 | 6.5 | +3.5 | | -NONE- | |
| A2 | | | | | | |
| bbbb | 8.6 | 8.6 | 0 | 8.0 | 6.0 | -2.0 |
| A3 | | | | | | |
| Bbbb | 5.2 | 5.2 | 0 | 8.3 | 9.66 | +1.36 |
| A4 | | | | | | |
| bBbB | 2.0 | 2.0 | 0 | 9.0 | 11.0 | +2.0 |
| A5 | | | | | | |
| 0000 | 5.75 | 7.25 | +1.5 | 4.0 | 7.5 | +3.5 |
| TOTALS | 4.91 | 5.91 | +1.0 | 7.32 | 8.54 | +1.21 |

APPENDIX K
PERCENTAGE OF CHANGE FROM PRETEST TO POST TEST
BY CRITERIA FOR A₃ AND A₄

APPENDIX K
 PERCENTAGE OF CHANGE FROM PRETEST TO POST TEST
 BY CRITERIA FOR A₃ AND A₄

| | # Char. | | Variation | | Cues | | Number | | Someone Else Read | | Words Print | | Other | |
|----------------------------|---------|-------|-----------|-------|-------|-------|--------|------|-------------------------|------|----------------|------|-------|------|
| | pre | post | pre | post | pre | post | pre | post | pre | post | pre | post | pre | post |
| A ₃ BbBb | 4 | 8 | 4 | 5 | 3 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 1 | 2 |
| A ₄ bBbB | 3 | 1 | 3 | 7 | 1 | 6 | 0 | 3 | 4 | 0 | 1 | 1 | 0 | 0 |
| Total | 7 | 9 | 7 | 12 | 4 | 7 | 0 | 5 | 5 | 0 | 2 | 1 | 1 | 2 |
| % using criteria* | 46.6 | 42.85 | 46.6 | 57.14 | 26.66 | 33.33 | 0 | 23.8 | 33.33 | 0 | 13.33 | 4.76 | 6.66 | 9.52 |
| % change pre to post | 3.75 | | 10.54 | | 6.67 | | 23.8 | | 33.3 | | 8.57 | | 2.86 | |
| Total change | | 89.51 | | | | | | | | | | | | |
| A ₃ (BbBb) | | | | | | | | | | | | | | |
| A ₄ (bBbB) | | | | | | | | | | | | | | |

* 15 pretest. 21 post test

APPENDIX L
PERCENTAGE OF CHANGE FROM PRETEST TO POST TEST BY CRITERION
FOR A₁ , A₂ , A₅

APPENDIX L

PERCENTAGE OF CHANGE FROM PRETEST TO POST TEST BY CRITERION

FOR A₁ , A₂ , A₃

| | # Char. | | Variation | | Cues | | Number | | Someone Else Read | | Words Print | | Other | |
|-------------------------------|---------|-------|-----------|------|------|------|--------|------|-------------------------|------|----------------|------|-------|------|
| | pre | post | pre | post | pre | post | pre | post | pre | post | pre | post | pre | post |
| A ₁ BBBB | 5 | 11 | 6 | 10 | 1 | 0 | 1 | 4 | 3 | 1 | 0 | 0 | 0 | 1 |
| A ₂ bbbb | 4 | 5 | 4 | 8 | 4 | 4 | 3 | 3 | 0 | 1 | 1 | 1 | 0 | 0 |
| A ₃ 0000 | 5 | 3 | 4 | 6 | 0 | 5 | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 1 |
| | 14 | 19 | 14 | 24 | 5 | 9 | 6 | 9 | 3 | 2 | 2 | 1 | 0 | 2 |
| % using criterion | 51.8 | 47.55 | 51.8 | 60 | 18.5 | 22.5 | 22.2 | 22.5 | 11.1 | 5 | 7.4 | 15 | 0 | 5 |
| % CHANGE pre to post | 4.35 | | 8.15 | | 4.00 | | 13.0 | | 6.11 | | 7.6 | | | 5.0 |
| Total change | 35.51 | | | | | | | | | | | | | |
| A ₁ BBBB | | | | | | | | | | | | | | |
| A ₂ bbbb | | | | | | | | | | | | | | |
| A ₃ 0000 | | | | | | | | | | | | | | |
| * 27 pretest and 40 post test | | | | | | | | | | | | | | |

APPENDIX M
DATA SUMMARY TABLE FOR (QUESTIONS) AND COMMENTS
MADE BY CHILDREN DURING READ ALOUD SESSIONS
BY GROUP AND BY BOOK

APPENDIX M

DATA SUMMARY TABLE FOR (QUESTIONS) AND COMMENTS

MADE BY CHILDREN DURING READ ALOUD SESSIONS

BY GROUP AND BY BOOK

| GROUP | <u>Enormous Watermelon</u> | | <u>Who's in the Shed</u> | | <u>McBungle's African Safari</u> | | <u>Who Sank the Boat</u> | |
|----------|--------------------------------|----------------|------------------------------|----------------|--------------------------------------|----------------|------------------------------|----------------|
| | 1st Reading | 2nd Reading | 1st Reading | 2nd Reading | 1st Reading | 2nd Reading | 1st Reading | 2nd Reading |
| A1(BBBB) | (2)15 | (1)15 | (2)19 | (2)21 | (1)26 | (6)41 | (1)30 | (3)32 |
| A2(bbbb) | (0)16 | (1)15 | NA | NA | (1)24 | (0)31 | (4)16 | (0)26 |
| A3(BbBb) | (0)16 | (1)18 | NA | (0)5 | (0)20 | (0)19 | (0)16 | (0)22 |
| A4(bBbB) | (0)7 | (2)16 | (2)12 | (0)20 | (3)24 | (8)53 | (7)28 | (2)36 |

VITA²

Kay Lallier Grant

Candidate for the Degree of

Doctor of Education

Thesis: THE MEANING THAT CHILDREN ASCRIBE TO PRINT AS A
FUNCTION OF EXPERIENCE WITH BIG BOOKS

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Leavenworth, Kansas, October,
22, 1951, the daughter of Mr. and Mrs. Leon E.
Lallier.

Education: Washington High School, Kansas City,
Kansas, 1965-1969; University of Kansas, Lawrence,
Kansas, Received Bachelor of Arts degree in Human
Development and Family Life and Psychology in
1973; Received Master of Arts degree in Special
Education from University of Tulsa, Tulsa,
Oklahoma in 1982; Completed requirements for the
Doctor of Education degree at Oklahoma State
University in May 1990.

Professional Experience: Kindergarten teacher,
Muskogee Day Nursery, Muskogee, Ok., 1973;
Preschool teacher, Children's House Montessori
School, Muskogee, Ok., 1974; Kindergarten teacher,
Haskell, Ok, 1974-1975; Coordinator for Title VI-B
Grant/ P.L. 94-142, Muskogee Regional Service
Center, Muskogee, Ok., 1975-1976; Preschool
Handicapped teacher/ coordinator, Muskogee Public
Schools, 1976-1978; Director of Child Care Center,
Muskogee General Hospital, 1982-1984; Field
Service Coordinator, Northeastern State
University, Tahlequah, Ok., 1985-1988; Graduate
teaching assistant, Oklahoma State University,
1988-1989. Early Childhood Program Chair and
Instructor. Northeastern State University, 1987-
Present.

Professional Organizations: Phi Delta Kappa, Association for Supervision and Curriculum Development, Association for Childhood International, National Association for the Education of Young Children, Southern Association for Children Under Six, Oklahoma Association for Childhood Education International, Oklahoma Association for Children Under Six, Muskogee Association for the Education of Children Under Six, Oklahoma Association for the Education of Young Children, Friends of Day Care, National Association of Early Childhood Teacher Educators, Oklahoma Association of Early Childhood Teacher Educators.