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CONCEPT PERCEPTION IN PRESCHOOL CHILDREN'S USE OF STORIES THROUGH SEVERAL MEDIA

The University of North Carolina at Greensboro PH.D. 1985

CONCEPT PERCEPTION IN PRESCHOOL CHILDREN'S USE OF STORIES THROUGH SEVERAL MEDIA

by

Mildred J. Lee Bonner

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

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1985

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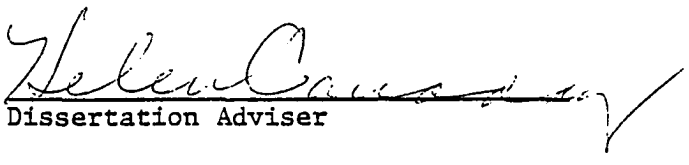

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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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March 19, 1985
Date of Acceptance by Committee

March 19, 1985
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BONNER, MILDRED J. LEE, Ph.D. Concept Perception in Preschool Children's Use of Stories Through Several Media. (1985)
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The purpose of the study was to determine the difference in concept perception in preschool children using story reading through several different media presentations. Specifically, it was to ascertain if significant differences did exist in concept perception of children ranging in age from 3 years 6 months to 5 years 6 months under three different methods of presentation: adult story reader present and reading story, filmstrip and cassette, and cassette recorder alone. Three stories were selected for the investigation with consideration being given to comparable content and length of the stories. All stories depicted the seasons and involved plants, animals, and human beings. Three trained professionals with earned degrees in the areas of child development or in child psychology evaluated the stories for appropriateness. A questionnaire and scoring scale were devised by the investigator and were evaluated by the three trained professionals.

Analysis of variance was the test employed in the statistical analyses of the data. A three-way analysis of variance was performed for center, group, and method, and a significant overall effect was found to be present among the three methods of presentation. Data in the ANOVA revealed that the effect for methods of presentation was significant at the .01 level of confidence. The overall effect for the three groups was not significant; that is, the sequence of presentation did not have an effect on the responses made by the children to the questions. The overall effect for centers was not significant; that is, the difference between mean responses of the children in the three different child care centers was not significant. The difference between response mean for

method of presentation showed that when children listened to the cassette recorder they made the fewest correct responses; filmstrip and cassette was second in correct responses, and for the method of adult reader present and reading, the children gave the most correct responses. The possible reasons for the difference between adult reader present and the filmstrip and cassette and cassette recorder were interaction, recall, and attention.

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CHAPTER I

INTRODUCTION

The array of story materials available to teachers and parents of preschool children is large and complex. The most appropriate type of medium for presenting stories has not been agreed upon. An expanding variety of books, films, filmstrips, tapes, and records is currently on the market. In 1978, 496,406 books were available along with 2,346,816 periodical subscriptions and 49,203,812 audiovisual materials (Hintze & Hodges, 1978). In 1980, 36.7 percent of the three- to four-year-old population were enrolled in school (Grant & Eiden, 1982). In 1982, when 21.8 percent of the juvenile population were nursery school children and 21.9% were kindergarten children (U. S. Bureau of Census, 1984) 125 million juvenile books were sold and 364 million dollars spent for juvenile books (U. S. Bureau of Census, 1984; Broker, 1983). Of the books published, the range was from very easy pictures without words to advanced juvenile books which adults enjoy almost as much as children.

The presentation mode of a story is important. It has been postulated that presentations which involve mechanical and electronic devices may result in a stimulus of less variety and complexity than that from a live human voice (Campbell & Campbell, 1976; Sherman, 1979). Along with the human voice in live presentation are the additional stimuli from variations in movements, pauses, gestures, and facial expressions. It may be that children hearing live reading attend more closely. Investigators stated that in stories involving recall when verbal stimuli were presented

via a recording, such a presentation had the advantage of controlling such variables as voice inflection, loudness, and intonation by holding them constant. However, it was found (Campbell & Campbell, 1976; Sherman, 1979) that children attended less well to a recorded presentation. It was then suggested that different treatments based on verbal content of recordings would have insufficient impact due to inattention of the listener. The writers concluded that live reading may be a preferable means of stimulus presentation where young children are concerned (Campbell & Campbell, 1976). No comparison in the study was made using a recording in conjunction with video.

Lack of experience with books and stories has been cited as an important factor in educational deprivation (Lomax, 1977). The stories a child hears are an important introduction to new vocabulary and serve as reinforcement and generalization for existing vocabulary. In the visual story situation at home and at school, the discussion which follows a story was reported to be particularly important in helping the child to relate new concepts to familiar contexts. From the research of the first six years, White (1975) found that children who did remarkably well at three years of age had a good start in regard to competence at six years of age. Included among other skills were those that are intellectual, linguistic, and perceptual. That method of presentation of materials to children which maximizes attention to the stimulus content is that which might best be most often selected.

The Purpose of the Study

The purpose of the study was to determine the difference in concept perception in preschool children using story reading through several different media presentations. Specifically, the study attempted to ascertain whether significant differences did exist in the concept perception of children ranging in age from three and one-half years to five and one-half years under three different methods of presentation: adult story reader present and reading story, filmstrip and cassette, and cassette recorder alone.

Hypotheses

For the present study the following hypotheses were tested:

1. The type of medium presentation of story reading will significantly affect concept perception among preschool children.

2. The presentation of a story by a reader in person will result in significantly better concept perception by preschoolers than presentation by filmstrip and cassette.

3. The presentation of a story by filmstrip and cassette will result in significantly better concept perception by preschoolers than presentation of the stories by a cassette recorder alone.

The following research questions were posed:

1. Are there significant differences between preschool children's concept perception from a story from an adult present and reading and that from a filmstrip and cassette?

2. Are there significant differences between preschool children's concept perception from a story from an adult story reader and that from a cassette recorder?

3. Are there significant differences between preschool children's concept perception from a story from filmstrip and cassette and that from cassette recording alone?

Definitions

For the study the following definitions were used:

Listener group referred to the children to whom the stories were presented via the several media.

Story reading referred to stories presented to children by any media.

Live reading referred to story reading by an adult reader in person.

Concept referred to a category, usually with an identifying verbal label in the cognitive structure of an individual; that is, the way in which an individual orders input for the assignment of perceptual-cognitive data (McReynolds, 1970).

Conception referred to that level of cognitive process which is characterized by the thinking of qualities and aspects from which comparisons and generalizations become possible and of which language is the instrument (Drever, 1969).

Perception referred to the process of recognizing or identifying some characteristics and is a subordinate process of cognition (Maier, 1978).

Memory referred to what a person conceives and constructs, not simply reproduction of previous input, but intelligent, selective, and applicative delivery of past experiences (Maier, 1978).

Cassette referred to audio-cassette.

CHAPTER II

REVIEW OF LITERATURE

A story represents a meaningful, often familiar situation. Experiencing books with delight is the first step toward becoming a lifelong reader and lover of books. It has been asserted by Sloan (1982) that the truly literate are not those who just know how to read, but those who read fluently, responsively, critically, and because they have the desire to read. Reading to children allows information to be processed through two sense modalities, vision and hearing. The mode of encoding and the amount of available information to encode are important aspects of learning in children (Rickel & Field, 1983). Children want the same books read to them again and again. Young children look at the pictures in books and talk about them. Younger children may even take the book to bed as though the book were a soft toy bear with which to cuddle (Larrick, 1982). There are times when the fable turns human experience into animal terms in order that the reader or listener may gain some psychological distance (Sheridan, 1979). Some writers (Levin, Shaffer, & Snow, 1982) referred to story reading and story telling as a creative, constructive process.

Researchers (Campbell & Campbell, 1976) compared two modes of story telling, live reading and recorded reading, to test the hypothesis that a preschool child would retain more information from a story told live than from a recording. Retention was measured by counting the number of themes and number of words used by the child in retelling the story. An attempt was made to play the record or read the story in the same manner

that would have been used if no experiment had been in progress. Campbell & Campbell (1976) found that children hearing the story told live by the teacher use considerably more correct themes and words in the retelling tasks than do children hearing the same story from a recording. They suggested that facial expressions, gestures, pauses and variations in movements may be factors in live story presentations. Further, other researchers found that when both stereotyped and nonstereotyped stories are presented, children remember more about the nonstereotyped ones, even though they like these less (Kropp & Halverson, 1983). Additional researchers (Blank & Frank, 1971) reported that direct questioning tended to result in recall of more ideas of the story presented than did having the child repeat each sentence. The researchers suggested that children can discern what was relevant to answer a particular question (Blank & Frank, 1971). The child over two and one-half years of age generally has enough skill in language so that language can be used rather exclusively in instructions during the testing process (White, 1975).

Lomax (1977) in a study of 28 preschool children in a nursery school, identified them as having either a high or low degree of interest in books and stories. Comparisons were done by means of observations, tests, interviews with parents about activities at home, and questionnaires for staff about activities at school. Findings were that all of the high-interest children had considerable experience with stories at home, but that this was true for only some of the low-interest children. Further findings revealed that as a group the low-interest children participate in more activities at nursery school but for shorter periods, and spend

significantly greater proportion of their time in nonspecific activity. Experience with books and stories has been frequently cited as an important factor in education (White, 1975). He recommended that one try to get the best quality of materials since the more information one gets, the stronger the concept formation.

Lomax (1977) found that in a further two-year longitudinal study that most of the nursery school boys in the investigation show interest in the nursery school book corner at age 5 but not at age 3; most of the girls were reported as already showing interest by the age of 3 years.

Research by Clay (1972) suggested that early experience with books and stories help children to acquire some rudimentary concepts of print, such as knowledge that words carry a precise message and that orientation of the page is important. An additional benefit of early experience with books is the development of an awareness of books as a source of interest and enjoyment and as a key to greater knowledge in almost every sphere of activity (Lomax, 1977).

Most children seem to find activities more enjoyable with adult attention and encouragement. Story reading requires not only the presence and physical assistance of an adult but may also employ extensive use of relatively complex language by the adult. The small number of children present at any one time for a story allows sufficient opportunity for individual attention and child-adult interaction in the situation (Lomax, 1977).

According to Durkin (1972), reading to young children was found to enhance their language development and to promote reading success. Durkin

urged frequent oral reading to young children in the belief that language is as much caught as it is taught. If parents read in the presence of their children, their children are also likely to try to read (Elkind, 1974). Flood (1977) urged parents to read to young children because books and stories provide children with models of book language which is an extremely important concept for young children. The effect of story reading is to lengthen thoughts, elaborate upon ideas, and to improve observational skills. Flood (1977) further found that story reading provides parents, teachers, and other adults with unique opportunities for verbal interaction with young children. Some researchers (Durkin, 1972; Flood, 1977) asserted that this interaction is directly related to language and later reading success since it creates an environment which fosters language growth in children. It provides experiences that result in new vocabulary and further serves as a vehicle for learning about children's readiness for reading. Skills related to later reading success are alphabet recognition, whole word recognition, vocabulary visual discrimination, visual recognition, and reproduction of geometric shapes (Flood, 1977). White (1975) found that between the ages of 3 and 6 years, a refinement of earlier abilities is noticeable rather than the emergence of new abilities.

In the story-reading situation children have been found to be an active part of the process of reading. They can speak, ask, and answer questions and relate the content of the present story to past experiences. Verbal interaction between child and adult has been found to enhance the overall effect of the story-reading situation (Flood, 1977). Additionally in the story-reading situation, children were reported to receive more

reinforcements such as attention, physical contact, and verbal praise (Schickedanz, 1978). Because of this, eventually the reading situation itself will become reinforcing (Durkin, 1972; Flood, 1977). Helping children to learn to love books or to develop an enjoyment of books was suggested as inherent in story reading (Durkin, 1972; Flood, 1977).

Children who learned to read easily in school are the same children whose parents read to them at home (Schickedanz, 1978). Teachers of young children have long believed that mothers and fathers should read aloud to their preschool children (Guinagh & Jester, 1972). As did others, these investigators asserted that the resulting interaction between parent and child is more complicated than just a single dichotomy. It is the quality of the adult-child interaction that results in a positive influence on the child (Schickedanz, 1978). The warmth of the story-reading situation as well as the generally positive affective climate created supports the child's emotional well-being and enforces the child's confidence. Guinagh and Jester (1972) found great variability in the way parents show a book to a child. The range is from a very complete and thorough description of the actions and noises to be found in pictures with an animated reading of the words, to a rather perfunctory series of questions or comments as "look at that - what is that", to the parent who simply turns the pages of the book held up to the child saying "see, see" (Guinagh & Jester, 1972).

White (1975) suggested that the degree of flexibility that humans have in their intellectual capacity is so important in the first three years of life that much greater attention must be given to the early years. Greater consideration must be given to the prevention of difficulties, to

the prevention of the loss of capacity and potential from birth. If the story-reading experience is to result in cognitive learning, a closeness between the adult reader and the child is required (Schickedanz, 1978). The assertion was that a story-reading situation that is loaded with the positive effects of attention, physical contact, and praise, is the same situation that is loaded with information for the child. This in part results because the adult is responsive to the child's behavior. The adult can be directed by the child to back up, go forward, to repeat, or to answer questions. Children are thought to gain basic understandings such as that books have beginnings and endings, that print is read from left to right, and that the reader verbalizes what is printed in the book.

A cognitive explanation (Piaget, 1963) for the effects of story reading focused on the story-reading situation itself as a source of data from which children construct knowledge about rules that govern the reading process. In a cognitive theory of learning, the learner is viewed as active, both in terms of motivation and construction of knowledge. Learning is conceived structurally as schemes or presentations of experiences that become reorganized and more highly differentiated as learning progresses. Access to experiences was deemed necessary for the learner to develop schemes.

Each of the preceding investigations was concerned with the presentation of reading materials to young children, but none specifically studied the three modes of visual and hearing and hearing alone in addition to adult story reading. The present investigation addressed three methods of presentation of story reading to preschool children.

CHAPTER III

PROCEDURE

Three stories were selected for the investigation. All stories depicted the seasons and involved plants, animals, and human beings. Consideration was given to comparable content and length of the stories.

The Instrument

For the three stories, comparable in length content, the time required for presentation of each story was approximately ten minutes. Evaluation of the stories as to whether they were comparable in content was done by three trained professionals who had earned doctoral degrees in the areas of child development or in child psychology.

Three types of media were selected for the presentation of the stories. These were vocalizations of the story by the reader, a filmstrip and cassette-recorded story with no reader present, and a cassette-recorded story only with no reader present.

A questionnaire and scoring scale were devised by the investigator and evaluated by the three trained professionals. The questions were asked each child in a one-to-one situation by the investigator.

Brief description of the stories

The Silver Wood. This story depicted the appearance of various baby animals and the numerous changes in many plants and animals throughout the seasons. This included the changes in trees and in the appearance of grass in the spring, the flowers and rain in the summer, plus

autumn when the silver trees' leaves turned to gold. The main human character was a woodsman who fed the animals and looked after the forest. Other humans included a family of picnickers (Kirby, 1967).

Autumn Harvest. In the story the hot days of summer changed to the cool days of autumn. Plants and the leaves of the trees changed color. Trees bore fruit. There were numerous animals that changed behavior with the change from a hot to a cool season. Children and a farmer were included in the story (Tresselt, 1969).

The Changing Seasons. The story showed how certain animals and plants change through the four seasons. Plants bud, bloom, and bear fruit. Leaves turn color and fall to the ground and some birds fly south in the autumn. Snow covers the ground in the winter. Activities of children and adults also were included (Blough, 1975).

Subjects

The subjects chosen for this investigation were preschool children from 3 years and 6 months to 5 years and 6 months old. The randomized sample of three listening groups was selected from three college preschool centers located in piedmont North Carolina. Sample size consisted of 63 children with 21 children in each of the three centers selected. The experimental period was approximately one month for each center.

Male and female children were included in the sample. Race and socioeconomic level were not considered.

Research Design

A randomized block design (Bruning & Kintz, 1977) was selected. At three child care centers, children were randomly assigned to three listening groups of seven children each. Each group of seven children was exposed to a randomly presented sequence of story presentations. As shown in Table 1, the children were randomly assigned to one of three listening groups designated as group 1, 2, or 3 and they remained in that designated group for the entire investigation. The sequence for group 1 was adult reader, filmstrip and cassette, and cassette recorder; the sequence for group 2 was filmstrip and cassette, cassette recorder, and adult reader; and for group 3 the sequence was cassette recorder, adult reader and filmstrip and cassette.

Table 1

Listening Group and Sequence of Presentation

Listening Group	Sequence		
	1st	2nd	3rd
1	a	b	c
2	b	c	a
3	c	a	b

a = adult present and live story reading

b = filmstrip and cassette

c = cassette recording

The sequencing of presentation was done according to centers such that each group of children in the center would have the same exposure to the different media. Presented in Table 2 are the sequencing for the centers A, B, and C. The first sequence is adult reader, filmstrip and cassette, and cassette recorder; the second sequence is cassette recorder, adult reader, and filmstrip and cassette; and the third sequence is filmstrip and cassette, cassette recorder and adult reader.

Table 2

Presentation Sequence in Center

Center A			Center B			Center C		
a	b	c	a	b	c	a	b	c
c	a	b	c	a	b	c	a	b
b	c	a	b	c	a	b	c	a

After each story presentation was completed, each child was individually asked ten questions. Four distractor questions were included with six relevant questions so that the child would not detect a pattern of the pertinent questions. The questions asked following each presentation were similar in content but pertained to the different specific story. In Table 3 are the questions for The Silver Wood presented by the adult reader reading the story; in Table 4, the questions for Autumn Harvest presented by cassette recorder; and in Table 5, the questions for The Changing Seasons presented by the filmstrip and cassette method.

Table 3

Specific Story Questions for Story Reader Presentation

Story	Questions
The Silver Wood	
	D-0. In the woods when did the animals sleep all the time?
	1. In what season did it snow in the story?
	2. In what season in the story were many animals born?
	D-2. In the story who fed the birds?
	3. In the story what color was the grass?
	4. In the story what color were the trees in the woods?
	D-4. In the story where was the woodsman's cottage?
	5. How many woodsmen in the story were in the forest?
	6. In the story how many dogs did the woodsman have?
	D-6. How tall was the woodsman in the story?

D-0; D-2; D-4; D-6 = distractor items

Table 4

Specific Story Questions for Cassette Recorder Presentation

Story	Questions
Autumn Harvest	
D-0.	In the story which birds flew in a V shape?
1.	In what season in the story did the leaves turn different colors?
2.	In what season in the story did flowers begin to grow?
D-2.	In the story what size were the trees?
3.	In the story what color were the nuts?
4.	What color were the leaves on the ground in the story?
D-4.	In the story what was the birds' song?
5.	How many animals in the story were in the forest?
6.	In the story how many birds were in the fields and sky?
D-6.	Which trees did the acorn nuts come from in the story?

D-0; D-2; D-4; D-6 = distractor items

Table 5

Specific Story Questions for Filmstrip and Cassette Presentation

Story	Questions
The Changing Seasons	
D-0.	In the story when did the children go to school?
1.	In the story in what season was it hot?
2.	In what season in the story did the birds build their nests?
D-2.	What type of birds were in the story?
3.	In the story what color was the snow?
4.	In the story what color was the sky when it snowed?
D-4.	In the story what did the children wear when it was cold?
5.	How many children in the story played in the snow?
6.	In the story how many birds flew south?
D-6.	What happened to the leaves on the trees when it was warm?

D-0; D-2; D-4; D-6 = distractor items

Collection of Data

Before testing. Teacher conferences were held in each of the child care centers. An overview of the experimental procedures and scheduling of events were discussed. A get acquainted meeting with the children was arranged so that the researcher could know the children and vice versa.

Setting for the experiment. The experiment was conducted in a room apart from the main activity area. The seven children were present in the room for the entire testing period. During the testing period the children not being questioned were given a drawing activity unrelated to the concepts tested by this investigation. Only the child being tested could hear the questions asked.

Methods of presentation. Three methods of presentation were employed. The first method was having an adult read a story in the presence of the children. A second method presented a comparable story in a filmstrip in conjunction with a cassette recording of the story being viewed. A cassette recording of a third comparable story, but without video, was the third method.

Instructions to the children. The following instruction was given to the group of children prior to each story presentation. "You are going to hear a story. Listen carefully because I am going to ask you some questions after you have heard the story."

Data Sheets. Separate data sheets specifying the method of presentation were used to record the results of each child's responses to the questions. These are shown in Appendix A.

Scoring

Each of the child's responses to each of the questions was recorded immediately following the question. The responses were recorded as a scale weight: correct = 3, almost correct = 2, and incorrect = 1. The probable descriptions of concepts in each story and the scale weights that were assigned are shown in Appendix B.

Analysis of Data

Analysis of variance was employed to analyze the data. Because interest was to determine the relative concept perception reaction to the three different media presentations, analysis of variance was selected to simultaneously compare means of the three listening groups (Agresti & Agresti, 1979).

CHAPTER IV

RESULTS AND DISCUSSION

The statistical analyses of the data are described and the findings of the investigation are discussed in the ensuing chapter. The purpose of the study was to determine the difference in concept perception in preschool children using story reading through three different media presentations. Specifically, the study attempted to ascertain whether significant differences did exist in the concept perception of children ranging in age from 3 years 6 months to 5 years 6 months under three different methods of presentation: adult story reader present and reading story, filmstrip and cassette with no reader present, and cassette recorder alone. These media were used as the independent variables in the analyses. The dependent variables were the total number of concept responses to the questions asked by the investigator. The computations of the data for the investigation were made on the Apple II Statistical Package (Steinmetz, Romano, & Patterson, 1981), with the remaining computations performed by hand calculations.

A three-way analysis of variance was performed on the data to determine the significant main effects. Means were obtained for group performance, center performance, and for method of presentation performance. A *t* test was used to find how the means for the methods of presentation differed statistically.

Results

Results of Group Response Means

Means were obtained for each of the three groups on their performances after each of the three presentations. Presented in Tables 6, 7, and 8 are the mean scores for the group performances. These data present an overall view and display mean group performances for each center used in the investigation.

In Center A for group 1 the mean score for responses of the children to the presentation mode of adult reader was 13.86 $\pm$ 2.85, to filmstrip and cassette it was 12.57 $\pm$ 1.90, and to cassette recorder a mean score of 10.57 $\pm$ 3.82 was obtained. For group 2 the mean score for responses of the children to the adult reader was 13.86 $\pm$ 3.13, to filmstrip and cassette recorder it was 11.29 $\pm$ 1.70, and to cassette recorder a mean score of 12.29 $\pm$ 2.98 was obtained. For group 3 the mean score for responses of the children to the adult reader was 15.00 $\pm$ 1.41, to filmstrip and cassette recorder it was 13.14 $\pm$ 1.95, and to cassette recorder a mean score of 13.16 $\pm$ 2.71 was obtained.

In Center B, for group 1, the mean score for response of the children to the adult reader was 12.14 $\pm$ 2.19, to filmstrip and cassette it was 11.43 $\pm$ 2.22, and to cassette recorder a mean score of 10.86 $\pm$ 2.48 was obtained. For group 2, the mean score for response of the children to the adult reader was 13.57 $\pm$ 2.22, to filmstrip and cassette it was 13.43 $\pm$ 3.15, and to cassette recording a mean score of 10.28 $\pm$ 3.20 was obtained. For group 3, the mean score for responses of the children to the adult reader was 14.57 $\pm$ 1.51, to filmstrip and cassette it was

Table 6

Center A Mean Group Response For The Presentation Media

Group	Presentation Media			Sequence
1	AR*	FC**	CR***	1
Mean	13.86	12.57	10.57	
Standard Deviation	2.85	1.90	3.82	
Number of Children	7	7	7	
2				
Mean	13.86	11.29	12.29	2
Standard Deviation	3.13	1.70	2.98	
Number of Children	7	7	7	
3				
Mean	15.00	13.14	13.16	3
Standard Deviation	1.41	1.95	2.71	
Number of Children	7	7	6	

* AR = Adult reader

** FC = Filmstrip and cassette

*** CR = Cassette recorder

Table 7

Center B Mean Group Response For The Presentation Media

Group	Presentation Media			Sequence
1	AR*	FC**	CR***	1
Mean	12.14	11.43	10.86	
Standard Deviation	2.19	2.22	2.48	
Number of Children	7	7	7	
2				
Mean	13.57	13.43	10.28	2
Standard Deviation	2.22	3.15	3.20	
Number of Children	7	7	7	
3				
Mean	14.57	13.28	11.33	3
Standard Deviation	1.51	2.81	2.06	
Number of Children	7	7	6	

* AR = Adult reader

** FC = Filmstrip and cassette

*** CR = Cassette recorder

Table 8

Center C Mean Group Response For The Presentation Media

Group	Presentation Media			Sequence
1	AR*	FC**	CR***	1
Mean	15.29	12.14	11.43	
Standard Deviation	2.43	2.34	2.82	
Number of Children	7	7	7	
2				
Mean	14.17	12.00	12.86	2
Standard Deviation	2.79	1.41	2.12	
Number of Children	6	7	7	
3				
Mean	13.67	13.14	12.00	3
Standard Deviation	2.25	3.85	3.32	
Number of Children	6	7	7	

* AR = Adult reader

** FC = Filmstrip and cassette

*** CR = Cassette recorder

13.28 ± 2.81, and to cassette recording a mean score of 11.33 ± 2.06 was obtained.

In Center C, for group 1, the mean score for responses of the children to the adult reader was 15.29 ± 2.43, to filmstrip and cassette it was 12.14 ± 2.34, and to cassette recorder it was 11.43 ± 2.82. For group 2 the mean score for responses of the children to the adult reader was 14.17 ± 2.79, to filmstrip and cassette was 12.00 ± 1.41, and to cassette recorder a mean score of 12.86 ± 2.12. For group 3, the mean score for responses of the children to the adult reader was 13.67 ± 2.25, to filmstrip and cassette the mean score was 13.14 ± 3.85, and to cassette recorder a mean score of 12.00 ± 3.32 was obtained.

Results of Center Response Means

In Table 9, mean, variance, standard deviation, and standard error are presented for each center. Inspection of the data across centers shows that neither the means nor the measures of variance appear to vary significantly. The standard deviations are small; therefore, the data did not vary to any great degree within centers. Figure 1 displays center response means. In Center A, the mean score for responses of the children was 12.86 ± 1.386; for Center B it was 12.321 ± 1.452; and for Center C 12.966 ± 1.239 was the mean response score.

Results of Listening Group Means

Groups were known according to the sequence of presentation regardless of the Center. Group 1 had the sequence of adult reader (AR), filmstrip and cassette (FC), cassette recorder (CR); group 2, the sequence of filmstrip and cassette, cassette recorder, adult reader; and

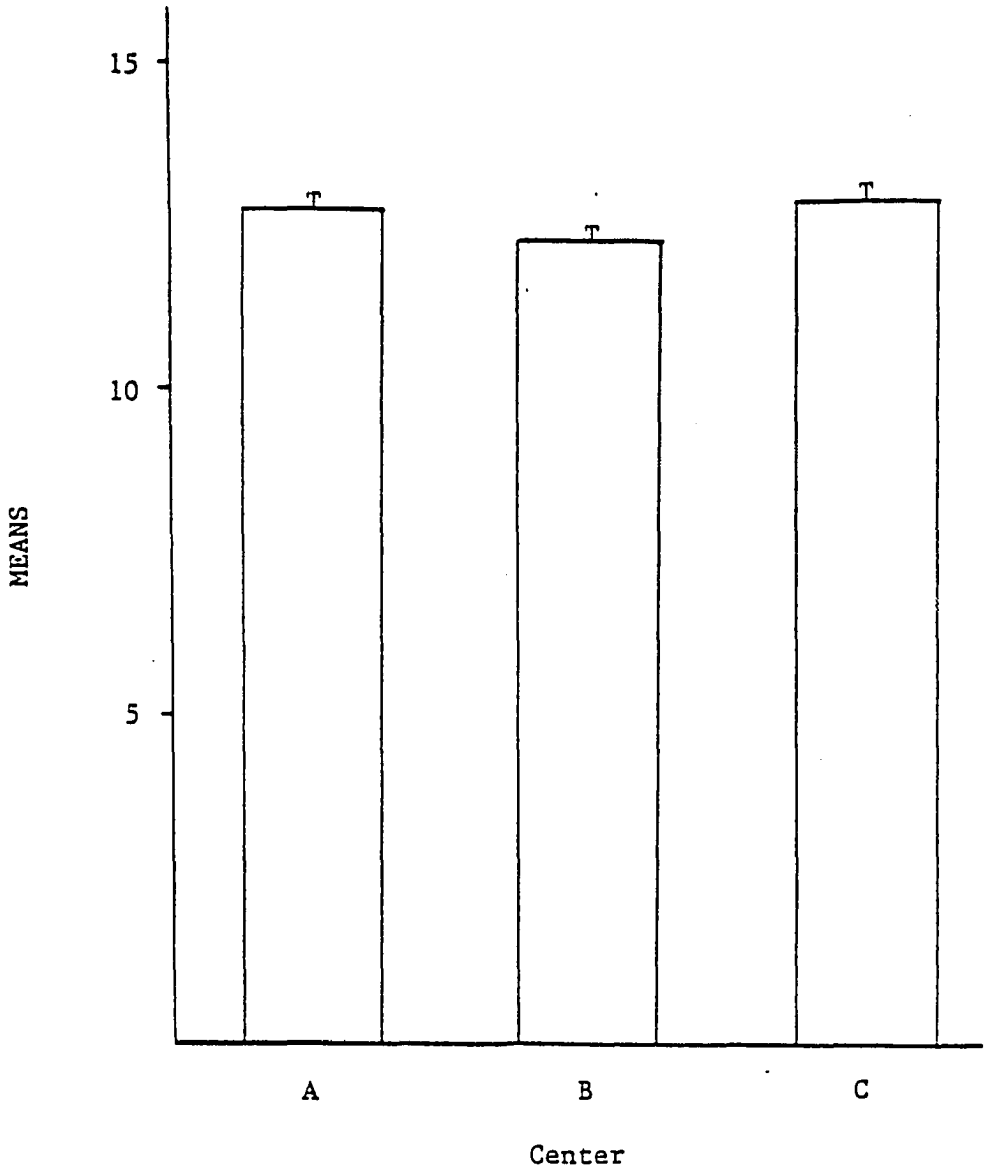
Table 9

The Response Means For The Three Centers

	Center A	Center B	Center C
Mean	12.86	12.321	12.966
Variance	1.858	2.109	1.536
Standard Deviation	1.363	1.452	1.239
Standard Error	.454	.484	.413

Figure 1

Comparison of Center Response Means



group 3, the sequence of cassette recorder, adult reader, and filmstrip and cassette. In Table 10 the means and variance measures are shown. The listening group means are shown in Figure 2. The mean response score for listening group 1 was 12.254 $\pm$ 1.502, for listening group 2 it was 12.638 $\pm$ 1.288, and 13.254 $\pm$ 1.32 was the mean response score for listening group 3.

Results of Mean Responses to Method of Presentation

In Table 11, the means and variance measures of the responses of the children to the three methods of presentation are shown. The variances are small and across methods they vary little. The response means for method of presentation are presented in Figure 3. The mean response of the children was 14.014 $\pm$ .922 for adult reader, 12.491 $\pm$ .812 for filmstrip and cassette, and 11.642 $\pm$ 1.005 for cassette recorder.

Results for the Three-Way ANOVA

A three-way ANOVA was performed for center, group, and method. The summary table for the three-way ANOVA is presented in Table 12. The data from the ANOVA table (No. 12) reveal that for all three centers, $F(2,158) = 1.086$. For listening groups, the $F(2,158) = 2.340$. The overall effect for listening group was not significant. With the response means for method of presentation, the $F(2,158)$ value equals 13.188. The F value was significant at the .01 level.

The data in the ANOVA table did not show any of the interactions as significant. Between center and group $F(4,158) = .759$; between center and method $F(4,158) = .681$; between group and method $F(4,158) = .181$; and between center, group, and method $F(8,158) = .896$. There was no

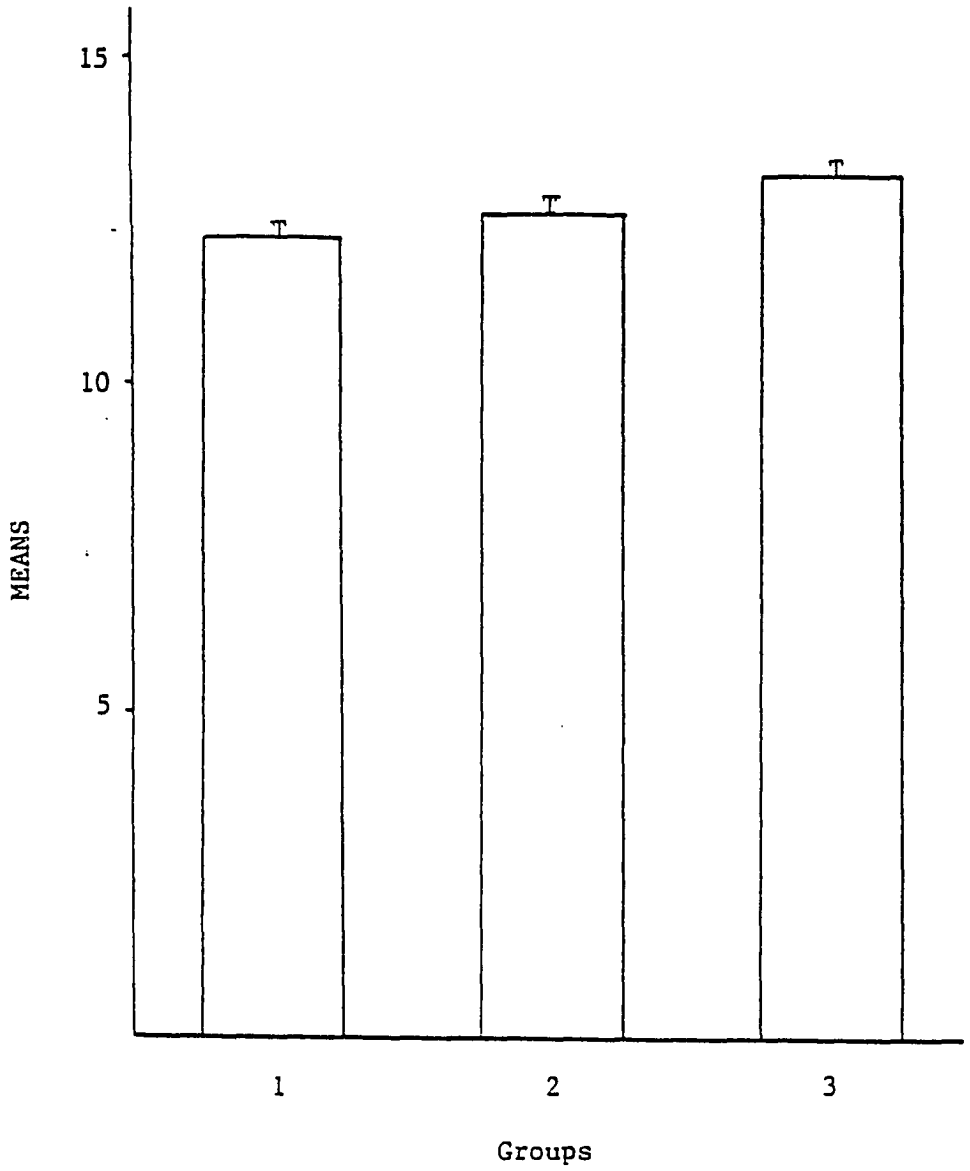
Table 10

The Listening Group Means

	Listening Groups		
	1	2	3
Mean	12.254	12.638	13.254
Variance	2.257	1.661	1.282
Standard Deviation	1.502	1.288	1.132
Standard Error	.500	.429	.377

Figure 2

Comparison of Listening Group Response Means



1 = AR, FC, CR

2 = FC, CR, AR

3 = CR, AR, FC

Table 11

The Method of Presentation Means

	Adult Reader	Filmstrip and Cassette	Cassette Recorder
Mean	14.014	12.491	11.642
Variance	.851	.660	1.011
Standard Deviation	.922	.812	1.005
Standard Error	.307	.270	.335

Figure 3

Comparison of Method of Presentation Response Means

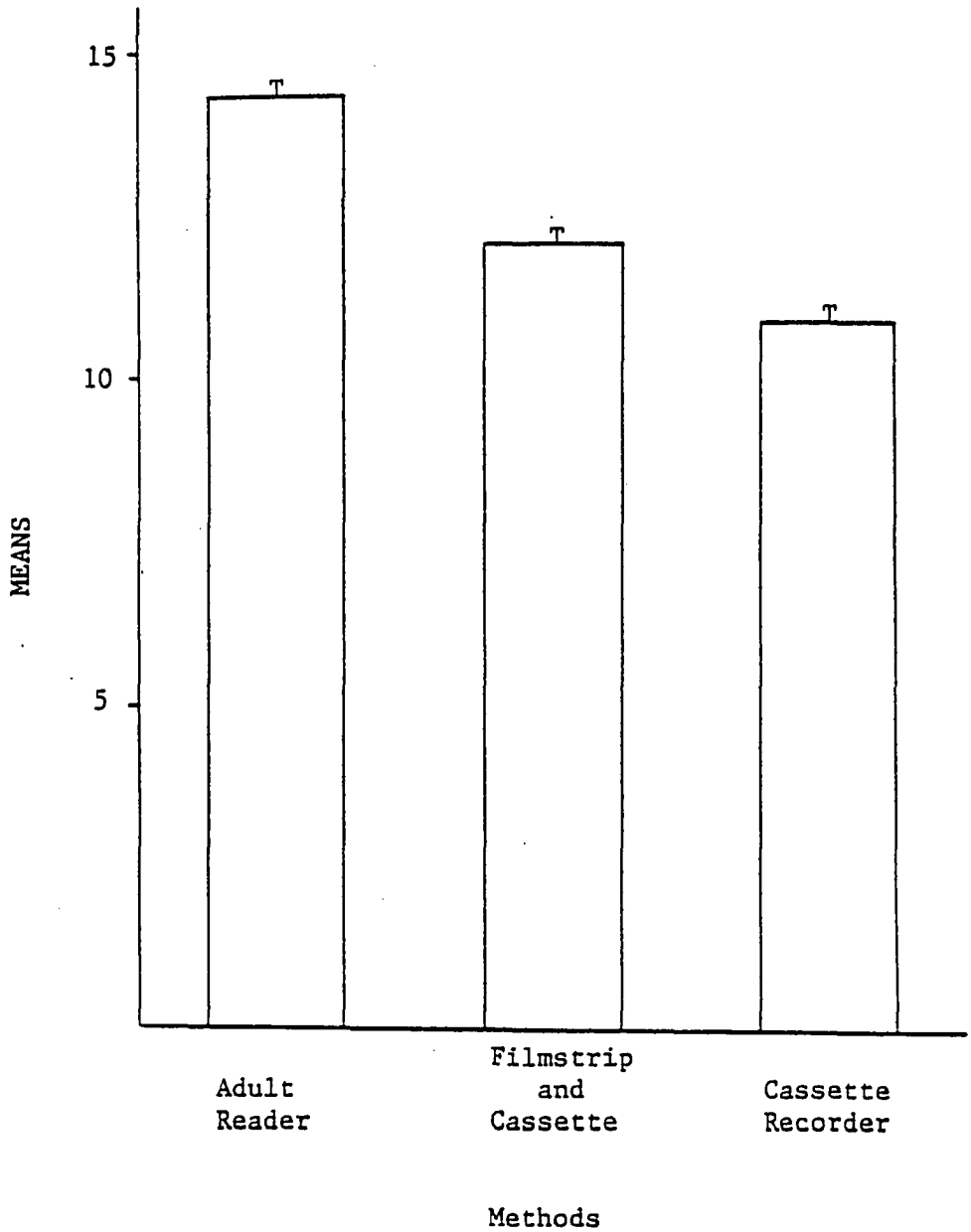


Table 12

Summary Table for Three-Way ANOVA

VARIABLE A:	SS= 14.6096245	DF= 2	MS= 7.30481226	F= 1.08643896
VARIABLE B:	SS= 31.4719311	DF= 2	MS= 15.7359655	F= 2.34039774
VARIABLE C:	SS= 177.34972	DF= 2	MS= 88.67486	F= 13.188542 **
A X B:	SS= 20.4161885	DF= 4	MS= 5.10404712	F= .759120901
A X C:	SS= 18.3163711	DF= 4	MS= 4.57909277	F= .681044855
B X C:	SS= 4.87230705	DF= 4	MS= 1.21807676	F= .181163596
A X B X C:	SS= 6.02736233	DF= 8	MS= 48.2188986	F= .896444843
W.CELL (ERROR)::	SS= 1062.33334	DF= 158	MS= 6.72362876	

** P < .01 * P < .05

Variable A = Center

Variable B = Group of children

Variable C = Method of presentation

significant interaction between center and group, between center and method, between group and method, nor between center, group, and method.

To find whether the means for the methods of presentation differed statistically, a t test for difference among means was performed. In Table 13 are presented the results of the test at several significant levels for all response mean comparisons. Filmstrip and cassette versus cassette recording was significant to the .02 level. The difference between response mean for adult reader versus filmstrip and cassette or cassette recording was significant to the .001 level. Noting the response mean scores in Table 11, it was found that cassette recording was the lowest mean, filmstrip and cassette rendered the next highest, and response mean score for adult reader was the highest.

Therefore, it was noted that all three methods of presentation differed significantly from each other. From inspection of the response mean scores it can be seen that adult reader method had higher correct responses than filmstrip and cassette method, and that filmstrip and cassette method had a higher score than cassette recorder method of presentation.

Discussion of Results

In the following section the hypotheses for the present investigation are restated, an interpretation of the findings of the investigation are presented in relation to each of the stated hypothesis, and the aspects as related to previous research are discussed.

Table 13

t Test Results for Difference Among Methods of Presentation at All Centers

	At .05 level Critical difference = .688	At .02 level Critical difference = .842	At .01 level Critical difference = .955	At .001 level Critical difference = 1.33
Adult Reader vs. Filmstrip and Cassette 14.01 vs. 12.49	Significant	Significant	Significant	Significant
Adult Reader vs. Cassette Recording 14.01 vs. 11.64	Significant	Significant	Significant	Significant
Filmstrip and Cassette vs. Cassette Recording 12.49 vs. 11.64	Significant	Significant	Non Significant	Non Significant

Interpretation of Results

Hypothesis 1. The type of media presentation of story reading will significantly affect concept perception among preschool children.

The present investigation found that the three types of media presentation--adult reader, filmstrip and cassette, and cassette recorder--did differ in the number of correct responses the child made to the questions asked by the investigator. With regard to the response mean scores for method of presentation, there was a significant overall effect. Therefore, the null hypothesis could be rejected and it could be stated that at least the means for one method of presentation was different. Failure to reject the null hypothesis suggested that sequence of presentation did not have an effect. With analyses of the mean responses for listening groups it was found that the overall effect was not significant. In other words, the sequence of presentation did not have an effect. For centers, failure to reject the null hypothesis suggested that no significant differences in response mean scores could be attributed to the center. With analysis of the response mean for center, it was noted that the means did not differ greatly; therefore, there was no significant difference between centers.

Influences on the differences in mean response scores for the three types of presentation will be discussed later in the chapter. Consideration was given to adult-child interaction, recall, and attention.

Hypothesis 2. The presentation of a story by a reader in person will result in significantly better concept perception by preschoolers than presentation by filmstrip and cassette.

The research question was posed: Are there significant differences between preschool children's story concept perception from an adult present and reading and that from a filmstrip and cassette.

The investigation revealed (see Table 11) that response to presentation with an adult reader was 10.867 percent higher than the method of filmstrip and cassette. When the presentation by adult reader was compared with presentation by cassette recorder, the adult reader method was 16.926 percent higher. From analysis of the data it was concluded that all three methods of presentation significantly differed from one another.

The analysis of the data found that the effect of the difference for adult reader versus filmstrip and cassette and versus cassette recorder would be expected to occur by chance less than once in one thousand times. Later in the chapter, supportive evidence will be suggested to explain why the adult reader method of presentation was better.

Hypothesis 3. The presentation of a story by filmstrip and cassette will result in significantly better concept perception among preschoolers than presentation by a cassette recorder alone.

The research question was posed: Are there significant differences between preschool children's story concept perception from filmstrip and cassette and that from cassette recording alone.

The investigation revealed that response to filmstrip and cassette was 6.797 percent higher than to a cassette recorder. Analysis of the data revealed a significant difference for filmstrip and cassette versus cassette recorder. The difference would be expected to occur by chance less than once in 200 times. Supportive evidence for a possible explanation for the difference in performance with the methods of presentation follows.

Supportive Evidence

Interaction. After many of the presentations in the present investigation the children asked that the story be read again. These findings concurred with Larrick's (1982) observation that children want books read again and again, repeatedly looking at the pictures in the book and talking about them. There are presumed benefits to the child from affective interaction during the period of story reading (Guinagh & Jester, 1972). A wholesome adult-child relationship is fostered in the story-reading situation that demonstrates to the child a feeling of caring and warmth (Willems & Willems, 1975) and, it is suggested, tends to generate higher responses to stimuli.

During presentation by the story reader, in the present investigation, the children sat on the floor facing the story reader who sat on a very low chair. The story book was opened toward the children so that the pictures and written pages could be seen by each of them at all times.

Sherman (1979) emphasized the reciprocal interaction between reader and audience and the face-to-face position as part of the physical setting. It was suggested that such an interaction was appealing and important to young children, for it implied a personal relationship with a caring adult. Voice inflection, pauses, and facial expression are part of the natural dialogue.

In further search of an explanation for the difference in the results from the three methods of presentation, additional studies were noted. White (1975), discussing conversation that is used with a child, stated that the conversation depended heavily on the actual physical presence of a person, toy, or other object around which the conversation

revolved. The interaction must be linked directly to concrete points. In the present investigation, the presence of the adult who was reading the book and the children handling the book were concrete events. It is the quality of the adult-child interaction that results in a positive influence on the child (Guinaugh & Jester, 1972). Most children seem to find activities more enjoyable with adult attention. The story reading allowed sufficient opportunity for individual eye-to-eye contact and child-adult interaction in the situation (Flood, 1979).

In the present study when method of presentation was filmstrip and cassette or cassette recorder, the children tended to face the point of stimulus even though the cassette recorder was placed near the investigator. However, when the method was adult reader, the presentation favored greater interaction with the reader as well as access to the pages of the book. Flood (1979) suggested that children needed to be a part of the process of reading. They need to speak, to ask and answer questions, and to relate the content of the story to past experiences. Interaction between child and adult enhances the overall effect of the reading episode.

In the story-reading situation, children are believed to receive many reinforcements such as attention, physical contact, and verbal praise. The interaction is reinforcing. Campbell and Campbell (1975) also postulated that preschool children would retain more information from a story told live than from a story with a recording. This was also confirmed in the present investigation by the analysis of the results.

Recall and recognition effects. In answering the questions for the present investigation, the children used both recognition and recall

memory. It was unlikely that either was a major concern with the three methods of presentation in the study. Clarke-Stewart (1985) reported that although recall memory in children is not as accurate, consistent, or extensive as recognition memory, by the age of 3 or 4, children's recall organizes itself into conceptual categories. On some occasions in the present study when the child could not immediately produce the word for correct response, an alternate and adequate response was stated: "I can't say the name". "I forget about the sky, but it's like your pencil". "It's too hard about the leaves. It's like my shirt". Young children, according to Speer and Flavell (1979), do possess some knowledge of the relative difficulty of recognition and recall tasks. Concurring with others, Yussen (1974) in a study in which 72 preschoolers participated found a highly significant correlation between attention and recall.

Hayes and Birnbaum (1980) conducted experiments to assess the degree to which preschool children remember information from video as opposed to audio material. The study used cartoons in which events were presented only visually, only aurally, or both visually and aurally. For the children in the study, retention of events portrayed visually was consistently higher than retention of auditory information. The results of the study stated that preschoolers tend to ignore large parts of the audio portion of stimuli and pay greater attention to the visual aspects of those presentations.

In the present investigation, the methods by adult reader and by filmstrip and cassette yielded higher response scores by the children than did the cassette recorder method.

Perlmutter (1980) asserted that preschoolers recall poorly, and do so because they lack the language necessary for processing information, lack appropriate strategies for remembering, and because they tend to retrieve information inefficiently.

Todd and Perlmutter (1980) found that out of the laboratory and in familiar surroundings, children can recall better. Although the recall of objects was the usual target of laboratory research (Perlmutter & Myers, 1979), it was found that children do recall social interaction and cartoon characters and that their recall for these is for recent time and for that extended back several months (Todd & Perlmutter, 1980). In a somewhat similar study, Stoneman and Brody (1983) tested 3- to 5-year-olds for the immediate and long-term recognition of material that was presented orally, visually, or both. It was found that children recognized better what was seen and heard than what they merely heard. A study of five-year-olds' memory of the images and sound from a "Sesame Street" episode also suggested that visual images are more salient and memorable than sounds (Pezdek & Stevens, 1984). In the question session of the present study, the children's responses were made to the question asked but almost invariably included a comment on events in their experience regarding some aspect of a scene in the book. Perhaps having experienced the stimuli from the presentation visually and aurally, in addition to having touched the book, provided a more meaningful experience for the child.

Some information-processing theorists (Craik & Lockhart, 1972) postulated that meaning information also affected the individual's ability to remember. It was suggested that information processing occurs

at different levels, from a shallow perceptual level, to deeper and more meaningful levels. Information that received scant and superficial analysis was soon forgotten; information processed at deeper levels was remembered better and longer. Furthermore, development seemed to improve children's abilities to process information at its deepest level (Naus, Ornstein, & Hoving, 1978). Finally, in an investigation by Perlmutter and Myers (1979), preschool children were shown small objects one at a time from categories such as animals, utensils, and vehicles. When the test was from three categories rather than nine the children remembered more. When the experimenter prompted the children with a clue--"Do you remember any other animal?"--they recalled even more. In the present investigation each child was asked two questions about each of three categories of concepts. Although only one question was asked to elicit a response, the child may have in some instances been receiving double prompts. There was the possibility, when a question was asked about the story read from the book by adult reader and about the story presented by filmstrip and cassette, that for the child double prompting for cues occurred. The child was prompted to recall what was heard and additionally what was seen, and thus had dual cues. Rickel and Field (1983) suggested that more information is processed by two sense modalities than by one.

Attention. In the present investigation, the children were instructed that they would be presented with a story and that after the story, each would be given a chance to answer questions about the story. The children were requested to listen carefully. Bandura (1969) as well as other researchers (Liebert & Fernandez, 1970) have hypothesized that attention

and learning are enhanced by direct verbal instructions to remember. Wright (1982) asserted that young children were particularly attentive to material containing features that were dramatic, colorful, and involved movement and change. This may have helped to account for the difference in child response to the methods of presentation. The filmstrip and cassette containing movement, color, and change provided visual and aural inputs and the adult reader method contained these in addition to interaction. The input for the cassette recorder method was basically by hearing alone. Interestingly enough, other researchers (Pezdek & Hartman, 1983) found that 5-year-old preschool children effectively distributed their attention so that they could process auditory and visual information while performing other activities. The children in the present investigation were physically active during all three methods of investigation.

The present investigation used a male voice for the narration with the presentation by filmstrip and cassette. Female voices were used in the presentations by an adult reading the story and by the cassette recorder. Animals, children, and adults were in all three presentation methods. A strong male voice sounded throughout most of the filmstrip and cassette presentation, and a male character frequently was prominent in the story presented by the adult reader. Attention is called to a study by Anderson and Levin (1976), who reported a study on attention that there is a differential in attention given by children to men and women characters in visual and auditory stimuli. Attention was depressed in the presence of men and enhanced in the presence of women. However, it was noted by the researchers that men tended to be absent when lively

music was on the sound track and tended to be heard in the presence of still drawings and relative inactivity. Women were seen and heard in the presence of child characters, singing, dancing, and rhythmic repetitions. The present investigator found that children hearing live reading made better responses. Perhaps they did attend to the presentation more closely, but if so it was not immediately observable. Perhaps they attended less well to recorded presentations, but again such was not observable.

Finally, research conducted (Conrad, 1972; Hayes & Schulze, 1977) to assess processing of static pictorial information suggested that young children often ignore an auditory input, as for example, the investigator labeling pictures, and rely on visual discrimination of stimuli for retention.

Other evidence. Ward and Wackman (1973), drawing upon Piagetian theory, posited a cognitive development model for children's processing of information presented visually. One facet of their model posited that the preoperational child's tendency to attend primarily to perceptual events of his or her immediate environment would cause the child to focus on the visual rather than the message. Piaget (1983) proposed a cognitive explanation for the effects of story reading to focus on the story situation itself as a source of data from which children construct knowledge. The preoperational period in Piagetian theory, which is from about 18 months to about 7 years, is a stage characterized by the important cognitive achievement related to the use of symbolic representation, that is, the ability of the child to use a word to refer to an object, person, or event (McGhee, Kopp, & Krakow, 1982). The children

in the study by the present investigator possessed very adequate language skills. Placed in a free-recall situation where stimulus information is not concretely before them, the preschool child is impeded in retrieval or recall, but when given sufficient stimulus support, the young child demonstrates substantial storage and retention capacities (Perlmutter & Myers, 1979). The child is a processor of information who bases actions upon information received and remembered (Myers & Perlmutter, 1978). Researchers, educators, and parents are concerned with how this might best be accomplished. In any case, as suggested by Papalia and Olds (1982), knowledge from research findings can make an appreciable difference if it is applied.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The purpose of the investigation was to determine the difference in concept perception in preschool children using story reading through three media presentations. Specifically, the study attempted to ascertain whether significant differences did exist in the concept perception of 63 male and female preschool children ranging in age from 3 years 6 months to 5 years 6 months under three different methods of presentation: adult story reader present and reading story, filmstrip and cassette, and cassette recorder alone. To secure the data needed, the following research questions were posed: (1) are there significant differences in preschool children's story concept perception from an adult present and reading and that from a filmstrip and cassette? (2) are there significant differences in preschool children's story concept perception from an adult reader and that from cassette recorder? and (3) are there significant differences between preschool children's story concept perception from filmstrip and cassette and that from cassette recorder?

Although the best type of media presentation of the story materials available to teachers and parents of preschool children has not been agreed upon, research has provided some interesting features for consideration. Previous studies have indicated that reading to children allows information to be processed through two sense modalities, vision and hearing. A story represents a meaningful, often familiar situation

to children. Some writers referred to story reading as a creative constructive process. Most writers agreed that children want books read again and again. The mode of encoding and the amount of available information to encode were considered important aspects of learning in children. Experience with books was cited as an important factor in education. The stories a child hears are an important introduction to new vocabulary and serve as reinforcement and generalization for the existing vocabulary. With books, children are taught to understand such basic ideas as that books have beginnings and endings, that print is read from left to right, and that when one reads one says what is in the book. Previous investigators have found that all children with high interest had considerable exposure to stories at home. Early experience with books and stories helps children acquire some rudimentary knowledge of print, such as understanding that words carry a precise message. Previous studies have found that most preschool children find activities more enjoyable with adult attention and encouragement. Story reading requires not only the presence and physical assistance of an adult, but allows opportunity for individual attention and verbal interaction in the situation. With a live reader presenting the story, facial expressions, gestures, pauses, and variations in movements may be accompaniments. Finally, previous studies have stated that direct questioning of the child tended to result in recall of more ideas of a story presented than did the method of having the child repeat each sentence.

In the present investigation, analysis of variance was selected to compare means of the three listening groups simultaneously to determine the relative concept perception of the three different media presentations.

Conclusions

The results of the data analyses revealed the following:

1. All three methods of presentation differed from each other significantly.
2. The difference between response means for presentation by adult present and reading story and by filmstrip and cassette or cassette recorder alone was significant. The adult reader method had higher correct response scores.
3. The difference between response means for presentation by filmstrip and cassette and by cassette recorder alone was significant. Filmstrip and cassette method had higher response scores than presentation by cassette recorder.
4. The center response means for the three centers were not statistically different.
5. The overall effect for listening group was not significant. The sequence of presentation did not have a significant effect.

Therefore for this investigation, the findings were that presentation by adult reader present and reading had higher correct response scores from the children than filmstrip and cassette or than cassette recorder alone. Filmstrip and cassette had higher correct responses than cassette recorder alone.

Recommendations

Researchers, educators, and parents are interested in finding and having available those methods and materials that maximize learning in children. Because of the need for substantial evidence for which methods

and procedures are best, the following recommendations are made:

1. Replication of the present study with larger groups of preschool children from a university setting, a nonuniversity setting, and children who stay in their own home with no preschool exposure.
2. Presentation of the stories using the same voice for the three methods: the adult reader present and reading, and that same reader's voice on the cassette recorder, and a cassette recording of the same voice for narration with the filmstrip.
3. A study involving the three modes of presentation of stories, but with the audio-visual and cassette recordings so arranged in the physical setting that the child could operate them and have these available plus an adult reader with story books.
4. Replication of the present study using elementary age children in public, private, and parochial schools.

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APPENDIX A

DATA SHEETS

Appendix A-1

Data Sheet for The Silver Wood with Presentation by Adult Reader

Child's Name	Q1			Q2			Q3			Q4			Q5			Q6		
	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I
1																		
2																		
3																		
4																		
5																		
6																		
7																		

C = Correct responses = 3

A = Almost correct responses = 2

I = Incorrect responses = 1

Appendix A-2

Data Sheet for Autumn Harvest with Presentation by Cassette Recorder

Child's Name	Q1			Q2			Q3			Q4			Q5			Q6		
	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I
1																		
2																		
3																		
4																		
5																		
6																		
7																		

C = Correct responses = 3

A = Almost correct responses = 2

I = Incorrect responses = 1

Appendix A-3

Data Sheet for The Changing Seasons with Presentation by Filmstrip and Cassette

Child's Name	Q1			Q2			Q3			Q4			Q5			Q6		
	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I	C	A	I
1																		
2																		
3																		
4																		
5																		
6																		
7																		

C = Correct responses = 3

A = Almost correct responses = 2

I = Incorrect responses = 1

APPENDIX B

SCALE WEIGHTS AND DESCRIPTION OF CONCEPTS

Appendix B-1

Scale Weights and Descriptions of Concepts for The Silver Wood

		SCALE WEIGHTS and DESCRIPTIONS of CONCEPTS IN STORY		
Story: The Silver Wood Concept and Question:		SCALE 3	WEIGHT 2	and DESCRIPTIONS 1
SEASON	1.	Winter; the really cold one	Spring	Autumn; Summer
	2.	Spring; when it begins to get warm	Summer	Autumn; Winter
COLOR	3.	Green; looks like the tree leaves	Green and brown	Black, etc.
	4.	Silver	Brown	Green, yellow, etc.
QUANTITY	5.	One; just himself	Two; not many	4 or more; many
	6.	One	Two; not many	4 or more; many

Appendix B-2

Scale Weights and Descriptions of Concepts for Autumn Harvest

		SCALE WEIGHTS and DESCRIPTIONS of CONCEPTS IN STORY
Story: Autumn Harvest Concept and Question:		SCALE WEIGHT and DESCRIPTIONS -------- 3 ---------- 2 ---------- 1 --------
SEASON	1.	Autumn; it begins to ------- Spring ---------- Winter get cool Summer Children go to school.
	2.	Spring; it begins to ------- Summer ---------- Winter get warm Autumn
COLOR	3.	Brown ---------- Tan ---------- Red, etc.
	4.	Brown ---------- Tan ---------- Green 5 or more
QUANTITY	5.	Many, many, a lot, ---------- 3 ---------- 2, 1, none large group
	6.	10 or more, many, many, ------ 5 ---------- 2, 1, none bagful

Appendix B-3

Scale Weights and Descriptions of Concepts for The Changing Seasons

		SCALE WEIGHTS and DESCRIPTIONS of CONCEPTS IN STORY		
Story: The Changing Seasons Concept and Question:		SCALE	WEIGHT and	DESCRIPTIONS
		3	2	1
SEASON	1.	Summer; After spring vacation time	Spring	Autumn; Winter
	2.	Spring; Begins to be summer	Summer	Autumn, winter
COLOR	3.	White, like frost, Like milk	White and grayish	Brown, black, green
	4.	White, gray	Dark	Blue, green, etc.
QUANTITY	5.	5 or more; many, many; Room full.	4; 3; more than three	One, none
	6.	5 or more many, many; Sky full; 4	3 more than 3	one, two, none

APPENDIX C

LETTERS AND CONSENT FORMS

August 22, 1984

Dear Parents:

I am a graduate student at the University of North Carolina at Greensboro with a major in Child Development and Family Relations. I am beginning my doctoral research and Dr. Helen Canaday is my advisor.

My proposed study is to determine the differences in concept perception in preschool children using story reading through several media presentations. When the three stories are ended the children will be asked individually several questions about the concepts in the stories. During the research, participation by the children is voluntary, and permission, without censure, will be given children who wish to leave the research situation.

It is expected that the benefits of this study will be some new information on the different influences of several media presentations. Questions about the research will be gladly answered. Summary results of the research will, upon request, be available to you. Please indicate below if the results of the study are desired.

It would be deeply appreciated if you will permit your child (children) to participate. If you agree to do so, please indicate such with your signature below and return to Mrs. Louise Wilson.

Thank you,

Mildred J.L. Bonner

Cut off and return signature portion to Mrs. Wilson.

This is to give my permission for my child(children)_____ to participate in the research conducted by Mrs. Mildred Bonner.

_____
(Parent's signature)

_____
Date

☐ I would like to receive a summary of the results of this study. Please send the summary to me at the address given below:

_____
_____
_____
(city, state, zip code)

August 22, 1984

Dear Parents:

I am a graduate student at the University of North Carolina at Greensboro with a major in Child Development and Family Relations. I am beginning my doctoral research and Dr. Helen Canaday is my advisor.

My proposed study is to determine the differences in concept perception in preschool children using story reading through several media presentations. When the three stories are ended the children will be asked individually several questions about the concepts in the stories. During the research, participation by the children is voluntary, and permission, without censure, will be given children who wish to leave the research situation.

It is expected that the benefits of this study will be some new information on the different influences of several media presentations. Questions about the research will be gladly answered. Summary results of the research will, upon request, be available to you. Please indicate below if the results of the study are desired.

It would be deeply appreciated if you will permit your child (children) to participate. If you agree to do so, please indicate such with your signature below and return to Mrs. Esther Coble.

Thank you,

Mildred J.L. Bonner

Cut off and return signature portion to Mrs. Coble.

This is to give my permission for my child(children)_____ to participate in the research conducted by Mrs. Mildred Bonner.

_____
(Parent's signature)

_____
Date

☐ I would like to receive a summary of the results of this study. Please send the summary to me at the address given below:

_____

_____

_____
(city, state, zip code)