THE INFLUENCE OF CHILDREN'S LITERATURE
AND ORAL DISCUSSION IN DEVELOPING ORAL LANGUAGE OF
KINDERGARTEN, FIRST, AND SECOND GRADE CHILDREN

DISSERTATION

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By

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td></td>
<td>VITA</td>
<td>iii</td>
</tr>
<tr>
<td></td>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>I</td>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Background for the Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Importance of the Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Statement of the Problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Procedure of the Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Definition of Terms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scope and Limitations of the Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>REVIEW OF THE LITERATURE</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Factors in Language Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acquisition of Syntax</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acquisition of Semantics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Programs of Oral Discussion and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Children's Literature</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>METHODS OF PROCEDURE</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Selection and Description of Sample</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Experimental and Control Treatments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Testing Procedures and Instruments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td></td>
</tr>
</tbody>
</table>
IV. FINDINGS ........................................... 82

Data on Syntactic Acquisition
Data on Vocabulary Acquisition
Summary of Findings

V. SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER RESEARCH ......... 92

Purpose of the Study
Methods and Procedures
Summary of Findings
Conclusions
Recommendations for Further Research

APPENDIX .......................... ............................ 109

BIBLIOGRAPHY .................. .......................... 120
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Distribution of Fathers' Occupations by Occupational Categories</td>
<td>57</td>
</tr>
<tr>
<td>2.</td>
<td>Syntactic Complexity and Vocabulary Analyses of Samples From Fifty Books Considered for Literature Program</td>
<td>61</td>
</tr>
<tr>
<td>3.</td>
<td>Syntactic Structures and Sources Identified for Repetition Test</td>
<td>73</td>
</tr>
<tr>
<td>4.</td>
<td>Linguistic Structures Repetition Test Mean Scores and Standard Deviations from September, 1971 Pilot Test</td>
<td>77</td>
</tr>
<tr>
<td>5.</td>
<td>Chi Square Analysis of Scoring of Paired Sentences From Linguistic Structures Repetition Test of a Random Sample of Ten Tests at Each Grade Level</td>
<td>80</td>
</tr>
<tr>
<td>6.</td>
<td>Syntactic Structures--Means by Treatment, Grade Level, and Sex</td>
<td>83</td>
</tr>
<tr>
<td>7.</td>
<td>Interaction Effects of Treatment, Grade Level, and Sex on Acquisition of Syntactic Structures</td>
<td>84</td>
</tr>
<tr>
<td>8.</td>
<td>Inter-Grade Level Comparisons on Acquisition of Syntactic Structures</td>
<td>86</td>
</tr>
<tr>
<td>9.</td>
<td>Vocabulary--Means by Treatment, Grade Level, and Sex</td>
<td>87</td>
</tr>
<tr>
<td>10.</td>
<td>Interaction Effects of Treatment, Grade Level, and Sex on Acquisition of Vocabulary</td>
<td>88</td>
</tr>
<tr>
<td>11.</td>
<td>Inter-Grade Level Comparisons of Acquisition of Vocabulary</td>
<td>89</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Background for the Study

Education of young children in the United States is undergoing a period of tremendous growth and change. New theories and new emphases come from philosophical views of the goals of education, from interest in child psychology and theories of learning, and from renewed sociological pressures on education to deal with problems of the poor and problems of various minority groups.

Many pre-school or early primary school programs\(^1\) have as a central focus the development of language -- particularly oral language skills as a basis for reading and further cognitive development. Although the goals of the programs are similar, the means to achieve the goals differ greatly. Many of the newer programs in early childhood education reflect a behavioristic view of the language acquisition process. Education is viewed as a problem of diagnosis and prescription, of developing a sequence of skills and then reinforcing children's behaviors.

Some of the programs illustrative of the above view of education and language development are the "Early Childhood Enrichment" program directed by Deutsch in New York City, the "Academically Oriented Preschool" at the University of Illinois directed by Bereiter and Englemann, the "Liverpool Laboratory School" at the Research and Development Center at Syracuse University, or the "New Nursery School" at Greeley, Colorado.

Other programs in early childhood education take a different view of both learning and language acquisition and emphasize a developmental approach in which the children or parents involved participate in the learning. These programs stress the affective as well as the cognitive, and rely on a wealth of experiences and opportunities for interaction with other children and adults to facilitate language development. Programs of this sort are exemplified by the "Nurseries in Cross-Cultural Education" in San Francisco, and the "Bank Street Early Childhood Center" in New York City.

Nearly all programs working with young children appear to recognize the importance of adult input of language. The kind of input, however, varies widely according to the view of the process of language acquisition. The key difference in the two views of the process of acquisition centers on the role of imitation and the need for reinforcement.

Recent psycholinguistic research suggests that imitation in the sense of copying adult models and reinforcement are not central to the process of acquisition. Instead, language is acquired through progressive and systematic testing of alternative rules in speaking to
determine which ones apply. Both McNeill and Slobin agree that part of this process is innate. McNeill\(^2\) propose that the child is born with a set of linguistic universals through which he processes the language of his environment. Slobin\(^3\) suggests that what is innate is some sort of processing mechanism which processes linguistic data. Both authorities, however, reject the notion that imitation is a major factor in language acquisition. McNeill, in fact, says that since children reconstruct adult models to make their own grammars, imitation plays no role in the acquisition of new transformations.\(^4\)

In the view of most psycholinguists the central feature of language acquisition is the internal and essentially unconscious processing of "language data" from the environment. This would suggest that programs for young children should be developed and tested which examine possible ways of facilitating their language acquisition through enriching the language "data" or through providing feedback for the "testing" of the rules.

This study, based upon the foregoing psycholinguistic view of language acquisition, attempted to differentiate between selected


factors in the adult input of language that could be expected to influence children's oral language development: (1) the input of adult language through literature rich in vocabulary and varied in syntactic structure and (2) the child's practice of language in which the adult sets conditions for conversation and responds to children's talk.

The requirements of the study for a suitable means of assessing children's growth in syntactic complexity led to a secondary purpose. This purpose was to develop a test of syntactic maturity that would reflect established developmental patterns and yet be feasible to use with a large number of subjects.

Two studies in particular support the importance of children's contacts with linguistically mature adults. In 1930 McCarthy attempted to describe how young children learn to speak. A major finding was that children who associate predominately with adults seem to have an advantage in length of response over those who associate predominately with other children.5 A few years later Davis examined the development of linguistic skill of twins, singletons with siblings, and only children. Although recent developments in the analysis of linguistic complexity were not used at that time, the children's responses were analyzed by grammatical complexity, number of subordinate clauses, and independent predicates as well as length of sentences. Two of the

major findings were that only children are definitely superior to children with siblings in every phase of linguistic skill, and that singletons with siblings are in turn somewhat superior to twins. These early studies describing children's language support more recent evidence regarding the influence of rich verbal stimulation on language acquisition.

Three recent studies have suggested that reading literature or discussing things with children may aid in the acquisition process. Irwin studied the effects of reading to young children to increase their vocalizations and found that reading and talking about pictures did increase spontaneous phonemic vocalizations of his two-and-a-half year old subjects. Cazden contrasted two facets of adult input in developing children's language. One treatment was simple expansion of the child's language by repeating the child's basic idea from his telegraphic sentence in complete sentence form; the other treatment focused on the idea of the child and extended that idea through both discussion and reading stories. Contrary to her expectations, the latter group of nursery school age children gained more on the language development measures. The third study, conducted by Cohen, involved twenty

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6E. A. Davis, The Development of Linguistic Skill in Twins, Singletons with Siblings, and Only Children from Age Five to Ten Years (Minneapolis, Minnesota: The University of Minnesota Press, 1937).


second-grade classes in seven New York City schools. The ten experimental group teachers were asked to read a story every day of the school year from a group of fifty books provided. The investigator found that regular reading of children's literature increased vocabulary, both in acquisition of new words and in quality of words.9

These studies suggest that reading literature to children facilitates language and vocabulary development. They have not, however, separated the reading of children's literature from discussion and other activities following that language input. Neither have they clarified whether the benefit lies in the data provided by the language of the books or in the feedback which the child gets from the adult in discussion or the practice of talking he gets in the follow-up activities.

The investigation reported here attempted to determine if the findings of Irwin and Cazden could be extended to apply to somewhat older children in small group situations. Also the effects of the two treatments on the acquisition of syntactic structures, which was not involved in Cohen's research, was investigated.

Measuring growth in syntactic acquisition when large numbers of subjects are involved presents numerous difficulties. The T-unit is an effective measure of syntactic complexity, but it requires an

analysis of a transcription of each subject's oral language. Getting an adequate sample of nearly four hundred children's language was not within the scope of this study. Other tests are individual and require a long time to administer. Therefore, it became necessary to develop a test that would measure syntactic acquisition and be feasible to use with a large number of subjects.

**Importance of the Study**

Three rather interrelated factors suggest the importance of this study. The investigator has sensed a narrowing of concerns and of focus both in regular elementary classes and in special programs for the disadvantaged or non-standard English speaking children. Another factor is the growing evidence that language acquisition continues throughout the elementary school grades. The third factor is the relationship of language acquisition to reading and cognition.

With the emphasis on achievement in academic skills reflected in increasing demands for accountability and in the national assessment projects, teachers appear to be narrowing their language programs to focus on specific skill development. Many teachers indicate that although they like to read to their students, they feel they can't take time from the reading readiness program or the language development program to do so. Reading literature to children does not seem to them to be clearly related to either reading readiness or language development.

If, however, one adheres to the view that language is acquired through progressive and systematic testing of alternative rules to
determine which ones apply and that the "data" for this process comes from the child's own linguistic environment, then the narrowness of such skills-oriented programs may actually inhibit language acquisition. Further, reading of children's literature which is rich in vocabulary and in the variety of syntactic structures used should facilitate language acquisition and readiness for reading.

Although a major part of language acquisition is probably complete for most children by the time they enter school, several studies have shown that significant developments do take place after five or six years of age. Chomsky\(^\text{10}\) found considerable variation in the age of acquisition of three structures which she investigated (ask/tell, promise/tell, and easy/hard to see) with children from five to ten years old. Loban\(^\text{11}\) found that his high group used grammatical complexity to a greater extent than the random or low group, but that all groups showed an increase in complexity with age, mental ability, and socio-economic status. Menyuk\(^\text{12}\) studied nursery school and first grade children and found that some transformations that showed maturation from the nursery population to the first grade population had not been acquired by the entire first grade populations. O'Donnell, Griffin and Norris\(^\text{13}\) who examined both oral and written language,

\(^\text{10}\)Carol S. Chomsky, The Acquisition of Syntax in Children From 5 to 10 (Cambridge, Mass.: The MIT Press, 1969).


found that word length of T-units increased in both speech and writing with every advance in grade. T-unit length reflects subordination and longer clauses while eliminating length through coordination of independent clauses.

All of these studies indicate that language acquisition does continue in the elementary school years. Its relationship to cognitive development is not as clearly established. In examining the role of language in thought and concept formation, Carroll\(^{14}\) suggests that concepts are the classes of experiences formed in individuals either independently of language processes or in close dependence on them, and that words come to stand for concepts when paired together as an experience. Vygotsky explains that the relationship of thought to word is a process in which thought comes into existence through words.

"... it is in word meaning that thought and speech unite into verbal thought. ... A word does not refer to a single object but to a group or to a class of objects. Each word is therefore already a generalization. Generalization is a verbal act of thought and reflects reality in quite another way than sensation and perception reflect it. ... meaning is an act of thought in the full sense of the term. But at the same time, meaning is an inalienable part of word as such, and thus it belongs in the realm of language as much as in the realm of thought."\(^{15}\)

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In exploring the relationship between language and thought, Sigel explains that for Piaget, language is the tool by which thoughts are expressed, having been preceded by actions which are internalized and eventually defined in verbal and symbolic forms. "Language conveys to the individual an already prepared organization of thought, concepts, and relationships. It is not thought, since thought can occur without language."16

Language acquisition and development seem to be related to reading as well as to general cognitive development. Recent research by Bougere17 and Goodman18 indicates that word recognition is not just associative learning of sound and symbol, but requires recognizing meaning. Reading comprehension involves relating word meaning and linguistic structures. Ruddell19 has found that control of syntax is significantly related to comprehension.


Since oral language acquisition and vocabulary development seem to play such an important part in cognitive development and in the reading process, and since both develop during the early school years, and since many language development programs as well as regular kindergarten and primary grade classrooms seem to be narrowing their programs and eliminating literature and discussion, it seems important to examine the adult's input into the acquisition process to determine which part of that input is most influential in promoting development.

**Statement of the Problem**

This study was designed to explore the acquisition of oral language and vocabulary from contacts with an adult by separating two facets of those contacts. If the main advantage of the adult input is the language data provided by such contacts, then the experimental program involving reading and discussion of children's literature containing a wide variety of syntactic patterns and vocabulary should facilitate the acquisition process. If, on the other hand, the main advantage of adult contacts is the opportunity for the child to use and practice his own language, then the second program involving sharing and discussion of varied topics should facilitate language and vocabulary development.

The test of acquisition of syntactic structures should show developmental increases with age and maturity from kindergarten to first and then to second grades.

To examine the problem posed by this study, the following hypotheses were tested:
1. There will be no significant interaction effect of type of program, grade level, and sex on acquisition of syntactic structures.

2. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at kindergarten.

3. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program and those in the no-treatment control group at first grade.

4. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at second grade.

5. There will be no significant difference in acquisition of syntactic structures between kindergarten, first grade, and second grade children.

6. There will be no significant interaction effect of type of program, grade level, and sex on acquisition of vocabulary.

7. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in kindergarten.
8. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in first grade.

9. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in second grade.

10. There will be no significant difference in acquisition of vocabulary between kindergarten, first grade, and second grade children.

**Procedure of the Study**

The subjects of this study were three hundred ninety-eight children in kindergarten, first grade and second grade from fifteen classrooms in four schools in the Madison Local School District in Franklin County, Ohio. Six classes, two at each grade level from two schools, served as the literature group; six more classes similarly constituted from the other two schools served as the sharing-discussion group. Three additional classes from the sharing-discussion schools served as a no-treatment control group with one classroom at each grade level. The four schools were paired to minimize socio-economic differences. One pair of schools was randomly assigned to the literature treatment and the other pair received the sharing-discussion program. One classroom at each grade level was designated by each of the four building principals to participate in the experimental
programs; the three no-treatment classrooms were designated after the schools had been paired and the treatments assigned.

Twelve undergraduate students from the Early and Middle Childhood Education Department at the Ohio State University worked in pairs with one class in the literature program and one class in the sharing-discussion program at the same grade level. Thus, four of them worked with kindergarteners, four with first graders, and four with second graders. Since they worked in pairs, they could reduce the ratio of elementary students to adults. The experimental programs lasted twelve weeks with three contacts per week. Testing was completed within a ten day period following the experimental program. The Peabody Picture Vocabulary Test was used to assess vocabulary acquisition and the Linguistic Structures Repetition Test devised by the investigator and based on recent psycholinguistic research was used to assess language acquisition.

**Definition of Terms**

The terms below will be used as defined throughout this study.

**Literature program.** This program emphasized the verbal input of the adult and involved reading stories to children. The stories were selected from those frequently recommended for children at these ages with two additional criteria: the syntactic complexity of the language and the ratio of vocabulary unknown to first graders. A minimal amount of discussion focusing on the major elements of the story was used in order to provide a more clear-cut contrast with the other experimental program.
Sharing-discussion program. This program emphasized the verbal output of the children and involved opportunities for the children to use and practice their own language. It provided a variety of interesting topics and problems for discussion and concentrated on minimizing the adult's input and maximizing the children's language output. The activities involved discussing and making up stories about pictures and other visual materials, discussing imaginary topics or those related to everyday experiences, and participating in chain stories, as well as participation in regular sharing activities.

Acquisition of syntactic structures. The knowledge of a number of syntactic structures within the child's own linguistic system was measured on a sentence repetition test, Linguistic Structures Repetition Test, devised by the investigator. The test involves syntactic structures which current linguistic research indicates may not be acquired until after the age of school entry. These sentences to be repeated were of equal length and used only vocabulary items identified by Dale and Schuh\(^2\) as known by 75% or more of the children in Columbus, Ohio.

Acquisition of vocabulary. Vocabulary was measured on the Peabody Picture Vocabulary Test published by American Guidance Service, Inc.

\(^2\)Edgar Dale and Emily Schuh, "A List of 1400 Words Known by 75% or More of First Grade Children in the Enrichment Program of the Columbus (Ohio) Public Schools," report of A Payne Fund Communication Project, The Ohio State University, Columbus, Ohio, March, 1970. (Mimeographed.)
Scope and Limitations of the Study

The length of the experimental period might have been the most critical factor in the results of this study. Elementary students were involved in the program three times a week for a twelve-week period from mid-September to early December. The decision to use undergraduate college students to administer the experimental programs was made to effect close controls on the two treatments, but that decision also meant that the experimental period had to fit with their college quarter scheduling. Also involved were the limitations of the resources of the investigator to carry on a longer experimental period. Whether the twelve-week period of time was sufficient to influence language or vocabulary acquisition is undetermined.

The study may also be limited by some factors which could not be completely controlled such as the intelligence, school achievement, or previous or concurrent experiences of the children involved in the study. No suggestions or restrictions were placed upon the regular classroom teachers, although treatments were confined to separate schools to inhibit confounding of the two treatments.

The instrument devised to measure the acquisition of syntactic structures is a new test. The Linguistic Structures Repetition Test is, however, based on linguistic research and the repetition technique of imitating a sentence as a measure of linguistic competence has been deemed valuable by several researchers. Slobin and Welsh investigated the imitative abilities of "Echo", a two-year old and concluded, "We believe that elicited imitation is a useful probe for revealing linguistic competence. In fact, we have just discovered that similar
gain might come from studying imitation of model sentences by adults.\textsuperscript{21}

The effectiveness of the college students working with the experimental programs may have differed. Their effectiveness in working with the two treatments was equalized since they worked with both treatments, but they were allowed to select which grade level they wanted to work with. Their ability was somewhat controlled in that each college student was recommended by her instructor in Education 460 -- Child Guidance, or Education 461 -- Conceptions of Teaching. In addition, they participated in a weekly seminar to plan for their work with the children which served as a training device.

\textbf{Summary}

The need for developing linguistic skill has been a recognized part of both pre-school and elementary school programs. Although research indicates the importance of adult input, little controlled research has been carried out to determine what part of the adult-child language interaction facilitates development. The present study contrasted a program of adult language input through literature with a sharing-discussion program emphasizing children's language practice with adult feedback.

\textsuperscript{21}Dan I. Slobin and Charles A. Welsh, "Elicited Imitation as a Research Tool in Developmental Psycholinguistics," Department of Psychology, University of California at Berkeley, April, 1967, p. 17. (ERIC, ED 012 892.)
Chapter II will contain a review of the literature related to acquisition of syntax and semantics and the literature dealing with programs of children's literature and sharing or oral discussion. Subjects, procedures, and instrumentation used in the study will be described in Chapter III. The data will be presented as findings in Chapter IV. Chapter V will include a summary of the findings, conclusions, and recommendations for further research.
CHAPTER II

REVIEW OF THE LITERATURE

This study examined the acquisition of syntactic structures and vocabulary in kindergarten, first and second grade children through two experimental programs: children's literature and sharing-discussion. Measuring syntactic acquisition necessitated the development of a test to use with large numbers of children. Therefore, there was a need to examine the literature in four areas. The first section deals with various factors in language development. The next two sections deal with psycholinguistic research in syntax since acquisition of syntactic structures was one of the measures used, and research in semantics since acquisition of vocabulary was the other measures. The final section deals with programs which have utilized oral discussion or children's literature to foster the development of children's language.

Factors in Language Development

Several early studies pointed to the role of the adult in language development as an essential part of that process. One of these early studies was conducted by Davis who followed up some earlier investigations by McCarthy and Day that indicated language differences between twins and singletons. Davis's study\textsuperscript{22} involved

\textsuperscript{22}Davis, The Development of Linguistic Skill.
four hundred and thirty-six subjects at three age levels: two hundred forty-eight five-and-a-half year olds, sixty-three six-and-a-half year olds, and one hundred twenty-five nine-and-a-half year olds. The children were representative of the general population of Minneapolis-St. Paul in socio-economic status and were interviewed individually in the schools. Davis recorded fifty responses for each child stimulated by a collection of toys and books. These responses were analyzed by length of sentence, functional analysis, grammatical complexity, grammatical errors, frequencies of auxiliary verbs, number of subordinate clauses and independent predicates, and the frequency, function, and length of different words used. Her five major conclusions were that (1) only children are definitely superior to children with siblings in every phase of linguistic skill, (2) singletons with siblings are in turn somewhat superior to twins, (3) twins from the upper occupational group by nine-and-a-half have practically overcome their language handicap, but twins from the lower occupational groups have made relatively little progress, (4) twins of the ages studied are especially retarded in perfection of articulation and this inferiority is marked during the kindergarten year, (5) at least during kindergarten, articulation is closely related to other phases of language development.

Davis's study seems to indicate that children who associate predominately with adults or perhaps to some extent with older brothers or sisters are more linguistically mature. This would be supported by McCarthy's earlier research undertaken in 1930 to more
accurately describe how young children learn to speak.\textsuperscript{23} The subjects in McCarthy's study were twenty subjects randomly selected at each six month interval from eighteen to fifty-four months of age. Each of the one hundred forty subjects was observed individually either in his home or another familiar place. The experimenter recorded fifty consecutive verbal responses, either spontaneous ones or those stimulated by toys and books. The language analysis included length of response by counting words or syllables, and complexity of response by classifying complete sentences as (1) simple sentences with or without a phrase, (2) compound sentences, (3) complex sentences, or (4) elaborated sentences. Word analysis was conducted to uncover trends in the number and variety of words used and the proportion of the various parts of speech. Among McCarthy's findings, the one particularly pertinent to the present study is that which indicates that children who associate predominately with adults have an advantage in length of verbal responses over those who associate predominately with children.

The importance of the adult input in children's linguistic development was noted in a recent experimental study by Cazden.\textsuperscript{24} The study involved twelve Negro children in a day-care center who were from twenty-eight to thirty eight months old. The children were randomly assigned to one of three treatment groups. Four children received forty minutes per day of extensive and deliberate expansions of their


\textsuperscript{24} Cazden, "Environmental Assistance."
telegraphic sentences. Four children were exposed to an equal amount of time spent in focusing attention on the children's ideas and continuing the conversation with a sentence related to the idea and not the form. This second group's treatment also involved reading story books to the children. The third group of four children received no special treatment. Contrary to her expectations, the second group which enlarged upon the child's language by extending his ideas and introducing different grammatical elements, word meanings, and relations among ideas was a more effective treatment for all of her measures of language development than working within the framework of the child's own language constructions and his own vocabulary. In discussing her research, Cazden suggests "that richness of verbal stimulation may be a critical feature." 25

**Acquisition of Syntax**

A variety of viewpoints and theories exist regarding the acquisition of language and in particular the acquisition of syntactic structures. Athey classifies the various models of language acquisition into three groups suggested by Hayes's statement about the three sources of contributions to knowledge in this field stemming from developmental psychology, psycholinguistics, and information processing. 26

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Athey's models are (1) developmental models which may be behaviorist, nativistic, or cognitive; (2) psycholinguistic models which may be phonological, syntactical, or semantic; and (3) information-processing models.27

This study is based upon a view of the acquisition process which comes from the psycholinguistic tradition; therefore, the literature reviewed will be related to that theoretical position. This view of acquisition suggests that children draw from their linguistic environment language data which is then internally processed to develop the common sets of rules used by adult speakers of the language of their community. Smith suggests that the child progressively amends his "babytalk" until it comes closer and closer to the forms of language spoken by his parents. Thus the process is similar to the Scientific Method in which observations are made, hypotheses are formulated, and these hypotheses are then tested against data collected. Smith says that "a child learning to talk is systematically trying out alternative rules to see which ones apply -- that he is 'testing hypotheses', literally conducting linguistic experiments, to discover specifically what kind of language is talked around him."28


Within this "rule" testing theory of language acquisition two major aspects must be considered further. The first concerns the source of acquisition; the second, the process of acquisition.

**Source of Acquisition**

The source of language acquisition includes both the human capacity for language and the particular linguistic environment of the child. Lenneberg has explored the human capacity for language and suggests that there are biological endowments in man that make language as we know it uniquely possible for our species. He suggests five chief reasons for suspecting such specific biological propensities for the human ability to acquire language; namely, (1) certain anatomic and physiologic correlates which seem to be related to verbal behavior, (2) a developmental schedule to the point that even if the maturational scale as a whole is distorted through retarding disease, the order of developmental milestones, including the onset of speech, remains invariable, (3) difficulty in suppressing language so that children suffering from gross and criminal parental neglect, or children who have parents who have no spoken language whatever, may nevertheless learn to speak with only minimal delay, (4) evidence that language cannot be taught to a sub-human form in terms of phonemic analysis, of understanding of syntactic structure of sentences, or of imparting the semantic domain of either concrete or abstract words, and (5) the existence of certain language universals even between language
families that are both very different and have no known historical connection.\textsuperscript{29} This article further suggests that language specialization might be expected from the evolutionary processes themselves and that the basis for language capacity might be transmitted genetically. He further maintains that man's ability to speak is not due to such general properties as increase in intelligence or weight of his brain.\textsuperscript{30}

McNeill states that the concept of a sentence provides a point around which so much else in language acquisition revolves. In addition virtually everything that occurs in language acquisition depends on prior knowledge of the basic aspects of sentence structure. He adds that the concept of a sentence may be part of man's innate mental capacity. His argument is as follows:

The facts of language acquisition could not be as they are unless the concept of a sentence is available to children at the start of their learning. The concept of a sentence is the main guiding principle in a child's attempts to organize and interpret the linguistic evidence that fluent speakers make available to him. What outside observers see as distorted or "telegraphic" speech is actually a consistent effort by a child to discover how a more or less fixed concept of a sentence is expressed in the language to which he has, by accident, been exposed. ... There is a natural order in the emergence of grammar which depends on the scope of the rules being learned. The most comprehensive rules paradoxically require the least time and experience with language, and therefore appear in development first. The striking fact,


\textsuperscript{30}Ibid., p. 45.
central to language acquisition, is that these rules of wide scope within each language are also shared by different languages. My assumption is that they are linguistic universals and are a result of children's capacities for language.  

McNeill is suggesting much the same kind of biological inheritance for language and specifically the notion of a sentence as the organizing force of language which Lenneberg cited. He is reflecting also the importance of the particular linguistic environment of the child as supplying the linguistic evidence that fluent speakers make available to him.

Numerous studies in linguistic acquisition point to the importance of the language surrounding the child from which he may draw and test out his own constructions. To examine the understanding of language universals, Slobin contrasted Russian and American findings on syntax, morphology, and word meanings. Some of his pertinent findings are (1) that word order is quite inflexible for Soviet children although they are exposed to many word orders in the adult language, (2) that as in English a small class of pivot words and a large class of open words are combined into three types of two-word sentences during the earliest stages, and (3) that early stages of syntax are probably constructed rather than imitated.  

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Ervin, in a study comparing grammatical differences between imitated and free utterances of five children between one year ten months and two years ten months, found that less than ten percent of the model sentences were imitated and that sentences freely generated from the models were more consistent with the individual child's grammar than those that were imitated to some degree. Ervin's general conclusion is that there is no evidence that the child's progress towards adult grammar is greatly affected by imitation of adult sentences.33

This same general conclusion may be drawn from Brown and Bellugi's longitudinal study of Adam and Eve.34 Part of this study examined the children's imitations of their mother's speech and the mother's expansions of their children's utterances for common features. They found that some of the child's utterances were ungrammatical and not really imitative and that these mistakes externalized the child's search for regularities in the language. In any case, imitation and expansion were not sufficient to account for the degree of syntax possessed by children at three years of age.

Cazden in an article about early language acquisition studies commented that imitation of the adult language is not the whole answer

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to the child's learning of language, or children would be less
impervious to correction and their stages of development would not be
so general.\textsuperscript{35} Cazden also notes that correction or reinforcement of a
child's language seems to serve no purpose unless the reinforcement is
supplied when the child speaks maturely and is denied when he speaks
immaturely. In fact, she suggests that probably exposure to well-
formed sentences in meaningful conversation is all the child needs to
learn the language. Thus, the source of language acquisition includes
both the capability of the child to learn language and his particular
linguistic environment.

\textbf{Process of Acquisition}

The process of language acquisition seems to involve a systematic
and progressive development or trying out of rules about how language
operates and then a revision of them in terms of the evidence given by
other speakers of the language. The system is evident in the predictable
order of acquisition although there may be relatively wide variations
in the rate of acquisition. System is also evident in the progressive
differentiation in syntactic and morphological rules. One finds
progressive increases in both complexity of language and in fluency
with increasing age and maturity.

\textsuperscript{35}Courtney B. Cazden, "Suggestions From Studies of Early Language
Church's central idea is that the acquisition of language which is essential to cognitive development is characterized by identifiable stages and principles.\textsuperscript{36} Some of these stages were identified by Bellugi and Brown in their study of the syntactic structures of two young children, Adam and Eve. They found the same order of appearance of certain inflections in both children's language although there was a fairly large difference -- from eight-and-a-half to fifteen months -- in the ages of the children.\textsuperscript{37} Moreover, the order of appearance of these inflections did not match with the frequency of the forms in their mother's speech. The order of appearance of the inflections was (1) present progressive, -ing; (2) plural on nouns, -s; (3) past on regular verbs, -ed; (4) possessive on nouns, '-s; and (5) third person on verbs, -s.\textsuperscript{38}

Menyuk also found certain stages in the acquisition of syntactic structures in a study of nursery school and kindergarten children. She used forty-eight private nursery school children and the same number of first graders including an equal number of boys and girls who had no physical or speech disabilities and whose I.Q.'s were above 90 on the Full Range Picture Vocabulary Test (Ammons and Ammons, 1948).


\textsuperscript{38}McNeill, \textit{The Acquisition of Language}, p. 83.
The speech of each child was tape recorded in three stimulus situations including family role playing as well as questions and picture stimuli. She found that certain transformations were used by significantly more first grade children or showed maturation from the nursery population to the first grade one. Some of the transformational forms used by more first grade children were passive transformations, the auxiliary verb have, conjunctions with if and so as introductory segments, and nominalization. Significantly more nursery school children were able to select the correct option only and were not able to use the obligatory rules that followed in such things as relative questions, pronominalization, and adjectives. She also found that significantly more nursery school children omitted the irregular past forms, substituting instead the regularized form at the morphological level.  

A third study showing evidence of stages in the acquisition of syntactic structures was done by Chomsky with children between five and ten years of age. She examined four particular constructions not usually present in the grammar of five-year-olds but normally acquired by age ten in an effort to determine the order of acquisition and approximate age of acquisition. The four constructions were pronominalization, promise/tell, easy/hard to see, and ask/tell. She found that pronominalization is quite rapidly and uniformly acquired at five and a half years. Two constructions, promise/tell and easy/hard to see, show similar characteristics and children from age nine on

showed uniform success with these constructions. In the ask/tell structure there was considerable variation in the age of acquisition and errors persisted up through the oldest children tested.  

A study of the morphological acquisition of pre-school age children, first graders, and adult college graduates was conducted by Berko. Subjects in this experiment were asked to inflect, derive, compound, and analyze compound words. The test used employed nonsense words which followed English sound combination rules and pictures which represented the words. Morphological rules for plurals, passives, third person singular forms, progressive and past tense forms, comparative and superlative forms of the adjective, and the diminutive -y, adjectival -y, and agentive -er were checked. Berko found that there were significant differences in performance with increased age. Another finding was that in instances where adults usually derive new words by using the agentive -er or the diminutive or adjectival -y, the children used a compounding pattern almost exclusively. When asked to explain compound words, however, only thirteen percent of the children gave etymological explanations; most of them answered in terms of identity or function.  

Differences in syntactic maturity in writing of fourth, sixth, eighth, tenth, and twelfth grade students and adults were investigated

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40 Chomsky, The Acquisition of Syntax, pp. 112-115.

by Hunt. Fifty students from each of the five grade levels and two
groups of adults were given a passage of thirty-two sentences of
connected discourse averaging four and a third words and asked to re-
write it in a better way without omitting any information. Their re-
writing was checked on five syntactic measures: sentence length,
main clause coordination index, T-unit length, subordinate clause
index, and clause length. He found that as school children mature,
they tend to embed more of their elementary sentences or kernel
strings even though this embedding is done in different ways at
different age levels. Older students tend to write significantly
longer clauses and significantly longer T-units.42

The complexity of language of elementary school age children was
examined also by Loban. A sample of three hundred thirty-eight
children were selected in 1952 in Oakland, California and oral
language samples were obtained annually throughout the elementary
grades. Transcripts of the oral samples were analyzed on eleven
features of oral language style, and a transformational analysis was
applied to two transcripts. Two major findings show the same
sequential development in complexity and fluency of language as that
noted by Hunt. First, students show an increase in complexity, both
in more transformations and in more different kinds of transformations,
as age increases and as ability in language increases. Secondly, there

42Kellog W. Hunt, "Syntactic Maturity in School-Children and Adults,"
Society for Research in Child Development Monograph, XXXV, No. 1
(February, 1970).
is a gradual increase in fluency throughout the seven years of elementary school with a spurt around grade five. This was found in the number of words used by children, the number of communication units, and the number of words per unit.\textsuperscript{43}

These studies show a systematic development or acquisition of language, a process that has a predictable order with variations in the rate of acquisition. Stages of development of syntax as well as morphology move from occasional production to generalization and finally to differentiation. Complexity in both spoken and written language progressively increase throughout the elementary grades.

**Acquisition of Semantics**

The acquisition of semantics is less clear-cut than that of syntax. Early studies in the area dealt primarily with vocabulary frequencies and derivations of words. The main concentration in linguistics recently has been in phonology and in syntax. The basis for the present investigation centers on a theory of semantic acquisition proposed by Clark which is called the Semantic Feature Hypothesis.\textsuperscript{44}

In many ways this hypothesis follows the same general model of acquisition as in syntax, proposing that there are stages in the

\textsuperscript{43}Loban, *The Language of Elementary School Children*.

\textsuperscript{44}Eve V. Clark, "What's in a Word? On the Child's Acquisition of Semantics in his First Language" (paper presented at the Conference on Developmental Psycholinguistics, State University of New York at Buffalo, Buffalo, New York, August 2-6, 1971), p. 12.
acquisition process and that children progressively amend their early language until it comes closer and closer to the forms of language spoken by adults. This process of amending early language is done by systematically trying out the alternatives and using information and feedback from the surrounding linguistic environment.

The Semantic Feature Hypothesis proposes that,

When the child first begins to use identifiable words, he does not know their full (adult) meaning; he only has partial entries for them in his lexicon. ... Thus, the child will begin by identifying the meaning of a word with only one or two "features" rather than with the whole combination of meaning-components or features that are used criterially by the adult. The acquisition of semantic knowledge, then, will consist of adding more features of meaning to the lexical entry of the word until the child's combination of features in the entry for that word corresponds to the adults. 45

When these additional features enter into the child's lexicon, the new words in the child's vocabulary take over parts of the over-extended semantic domain. The general meanings of various words are gradually narrowed down until they approach the adult meaning. An indication of this may be seen in the semantic problems that the older child faces. These problems have to do with word pairs that are closely related in meaning and so have a large number of common semantic features. One such group of words are polar adjectives such as more and less, long and short, high and low.

Thus, if the child learnt a feature like + Amount first in learning the meanings of more and less, the meanings of these two words could well be confused. It would not be until the child learnt the contrasting values of polarity, that more was positive and less negative, that this pair of antonyms would be interpreted correctly.46

Donaldson and Wales performed a series of experiments with young children in Edinburgh, Scotland examining the acquisition of pairs of relational terms such as same-different, more-less, tall-short, and big-wee. They pretested fifteen children about three and a half years old and followed them until they were five. They found no evidence that children made distinctions between the pairs of terms. "The children manifested in their responses a failure to differentiate between the two opposing members of the pair (more-less), showing in each case a strong tendency to interpret both members in a way that would be correct for one of them in the adult language."47 The pairs were treated as synonyms with the negative term (e.g., less, different, short, low, wee) interpreted as meaning its positive opposite. The distinction between the positive and negative terms is not only in the sense of meaning, but also in the sense of function. The positive term has a nominal use as well as a contrastive use, while the negative term is only contrastive.

46 Ibid., p. 15.

Another semantic problem faced by an older child with words which are closely related in meaning are those in which there is an overlap in meaning. In such words as boy-brother or girl-sister, one word of each pair may refer to a subset contained within the other word, but still have some additional and more specific features. This is true of children in the middle grades who, when asked how many brothers or sisters they have, will include themselves when responding if they are of the same sex.

The Semantic Features Hypothesis implies that the more general features are acquired earliest.

This claim is concomitant with the predictions made about the confusions of antonyms and of words that overlap in meaning. It also follows from the prediction that children will over-extend (by adult standards) many words in such a way that their categories will be delimited differently from the adult's. Furthermore on the basis of some recent experimental work, it would appear that if the features which, combined, make up the meaning of a word are related to each other hierarchically, then the order of acquisition is top-down. ... Finally, it is essential to point out that the features for each word separately have to be 'learnt' in the acquisition of the word itself. \(^{48}\)

Thus the child will acquire general features first and later as he learns more about the meaning of the word, he will gradually add the specific features that differentiate one word from another.

The question now presented is one which has implications for education: How does the child learn more about the specific features

\(^{48}\)Clark, "What's in a Word?", pp. 18-19.
that differentiate words from each other? There is some suggestion that the earliest features may be primarily perceptual ones, and that later combinations of features or relations between features are used.

It is possible that the use of perceptual features that are then interpreted as the 'meaning of a word' thus follow a developmental pattern for perception. To begin with, only single features are interpreted and put down as the meaning for a word, but later on, configurations of perceptual features are used as a structured whole to code (some of) the word's meaning.49

Menyuk, in discussing the acquisition of dictionary meanings, suggests that the surface similarities to adult usage do not necessarily mean that the meaning of lexical items and structures are the same for children and adults even when used appropriately by children.

"... although the scaling factors tested in the semantic differential elicit similar types of responses from children and adults, children appear to understand these lexical items along a restricted dimension, whereas adults appear to understand these items along several distinct but related dimensions."50

In acquiring dictionary meanings, context seems to be an important factor. Prentice reported a study involving twenty-four boys and twenty-four girls in the fourth grade at the University School, Bloomington, Indiana, on semantics and syntax in word learning and found that 'presenting a word in syntactic context apparently does

49 Ibid., pp. 69-70.

facilitate the acquisition of meaning."51 Another suggestion about learning word meaning comes from Thompson's discussion of a college reading improvement program. She suggests four general approaches to vocabulary development: wide reading, word origins, structural analysis, and dictionary study. She concludes that the "key was words important to the teenager" and supports the importance of context.52

The basic view of acquisition of semantics is primarily a developmental one. It assumes that the meanings of words are made up of features or components of meaning and that these are acquired in a sequential pattern. The child gradually amends his semantic items by processing information from his linguistic environment.

**Programs of Oral Discussion and Children's Literature**

The development of the two experimental programs of sharing-discussion and reading of children's literature were based on authoritative statement as well as research findings. These sources indicate that language skills are developed through participation in oral discussion and listening to children's literature.

**Programs of Children's Literature**

The major concerns with literature are reflected by Lewis who asks, "What do we know about the power of literature to help young


children master vocabulary, experience the meaning of style, and extend their own imaginative uses of words?" The present investigation is an attempt to answer part of her question. Others have also addressed themselves to an examination of the effects of literature. Martin says that language instruction takes on two significant meanings that a child must have abundant opportunities and suitable materials in the classroom (1) to help him use language to create and solidify his personal world, and (2) to use language to bridge from his world into the lives of other people. Specifying this further, "Language learning becomes available to all children when the classroom teacher dedicates herself to the miracle of language that she finds in children's mouths and in the linguistic heritage of books." "

Huck suggests that literature may contribute to children's language development in four ways. "(1) It increases children's vocabularies, (2) it develops sensitivity to language, (3) it provides a model for their own writing skills and (4) it serves as a springboard for their creative activities." "

It is apparent that authorities in children's literature have maintained that it has significant contributions to make in language


growth and development. This has been borne out in research studies using children's literature.

**Research Studies Using Children's Literature**

Although the research literature involving reading of children's literature is not extensive, six relatively recent studies have shown positive effects on various aspects of language learning. These studies all involve subjects of nursery school or elementary school age children and have attempted to develop linguistic skills.

Cohen studied the effect of literature on vocabulary development and reading achievement.\(^5^6\) Her study involved twenty second grade classes in seven schools. Of the five hundred eighty children tested at the beginning of the research, two hundred eighty-five yielded post-test data. The children attended public schools in New York City designated as Special Service Schools because of their academic retardation, low socioeconomic population, and high percentage of ethnic and racial minorities. Fifty books for the teachers to read were placed in each of the ten experimental classrooms and teachers were asked to read a story every day of the school year from the books given to them. They were also asked to choose a suitable follow-up activity from the types suggested in the Manual of Accompanying Activities. These activities included such things as discussion, dramatization, drawing illustrations, construction, and letter writing. The books were judged

\(^{5^6}\text{Cohen, "The Effect of Literature," pp. 209-217.}
on level of difficulty according to length, complexity of plot, and
quality of language following three selection criteria: (1) events,
concepts and relationships must be within the scope of young children's
conceptual grasp and deal with the universal in childhood experience;
(2) the stories must allow for emotional identification with the
characters, their aspirations and fears; (3) the stories must be
written in language which flows naturally and best conveys the precise
idea or colorful image to the listener without being confined to a
single grammatical structure or a fixed sentence length.

At the end of the experimental period the Metropolitan Reading
Achievement Test was given and separate scores for Word Knowledge, Word
Discrimination, and Reading Comprehension were noted for each subject.
A Free Association Vocabulary Test was also given to measure specific
vocabulary knowledge. The experimental group showed an increase in
vocabulary and in Word Knowledge significant at the .005 level. That
group also showed an increase in Reading Comprehension significant at
the .01 level. There was no significant difference in Word Discrimi-
nation or in quality of vocabulary although in the latter, significance
at the .05 level was narrowly missed.

The second research study by Cazden also used literature in one of
the experimental groups in examining the acquisition of grammar.57 The
subjects were twelve Negro children from twenty-eight to thirty-eight
months old who attended a day care center for eight to ten hours per day.

The children were randomly assigned to one of three treatment groups. Four of them received forty minutes per day of extensive and deliberate expansions; four others were in an individual play session in which the adult read and talked to the children in complete well-formed sentences, but did not expand the children's own sentences; the other four children received no special treatment. The children who received the second non-expanding treatment in language stimulation gained more on all six measures of acquisition of grammar: the sentence imitation test, mean length of utterances, complexity of noun phrases, complexity of verb phrases, rations of frequency with which copulas were supplied, and frequency of sentences containing both subjects and predicates.

McDonald reports on a study of language development for Spanish speaking children using literature. The study was conducted for a twelve-week period from March to June, 1966. The experimental group received a planned program in children's literature comprised of folk tales, picture storybooks, and folk songs. Their progress was evaluated through anecdotal records and vocabulary tests. "The data reported here supports strongly the Literature Experience Approach to language learning. This approach emerges as a highly effective program for young children in stimulating and promoting growth in language attitudes, skills, and abilities." 

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59 Ibid., p. 133.
A fourth study using reading of children's literature to develop language was conducted by Fodor in 1966. 60 His experimental group consisted of twenty-four children from twenty-one to thirty months of age. Stories were read to the children for twenty minutes a day, five days a week for three months. Approximately two-thirds of the time was spent reading and the rest of the time was divided between pointing out word-referent associations and applying operant conditioning principles to children's speech. A control group roughly matched for age, race, sex, and socioeconomic status took both pre-tests as well as the experimental group. Language development was measured by the number of words spoken in the course of thirty 'expression units' and by the combined score on the Pacific Expressive and Receptive Vocabulary Tests. The experimental group exhibited a gain in receptive vocabulary significantly higher than the control group at the .001 level and a gain in expressive vocabulary significant at the .05 level. There was no significant difference between the groups in the number of words spoken in the thirty expression units, although the experimental group scored higher.

Bailey studied the use of a library resource program which consisted of using children's books and story-telling devices to improve the

language abilities of disadvantaged first grade pupils. Twenty-five children for the experimental group and twenty-five for the control group were selected randomly from the population of a school in a low-economic urban area. A second control group of twenty-five was also selected from an economically favored residential area of the same city. Both control groups did not participate in any special program, but continued in a curricular program traditionally accepted for first grade. The entire battery of the Illinois Test of Psycholinguistic Abilities was given as a pre-test and as a post-test to all subjects in the study. The experimental group scored significantly higher than the disadvantaged control group on Visual Decoding, Motor Encoding, Vocal Encoding and the total ITPA. The non-disadvantaged control group scored significantly higher than the disadvantaged control group on several subtests, but scored higher than the experimental group only on Auditory Decoding. There was no significant difference among the three groups on Auditory-Vocal Automatic, Auditory-Vocal Sequential, Visual-Motor Sequential, and Visual-Motor Association.

The sixth study involved an oral language program using children's literature as a model for language and as stimulation for language activities in working with black children who spoke a non-standard

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Five hundred black children in twenty classrooms in four New York City area schools from kindergarten through third grade participated in the study. The experimental program exposed the children to a wide variety of language models from literature. Following the daily reading of literature, various oral activities such as puppetry, creative dramatics, story telling, role playing, discussion, choral speaking, and oral repetition games were used. The control group read aloud to the children from the same literature selections. Their follow-up activities did not include the directed oral language activities of the experimental group, but instead emphasized concept development and enrichment.

The Education Study Center Bidialectal Proficiency Task was given to determine if the two treatments differed in enhancing the children's ability to reproduce both standard English and non-standard dialect structures. Pretest scores were used as the covariate. Statistically significant differences in the use of standard English structures at the .01 level for kindergarten and at the .05 level for the total group. No changes were statistically different for the non-standard structures indicating that children in this study could increase their facility with standard English without losing facility in their non-standard dialect.

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All six studies have shown literature to be effective in facilitating some aspect of language acquisition or development. All of them have used also some sort of activity program or concentrated oral discussion as a follow-up to the stories read to the children. None of the control groups have used oral language activities not based on the literature; in fact, in most of the studies the control groups have been no-treatment control groups. The present study is an attempt to separate the literature treatment from the oral discussion and participating activities to further specify what is essential in the acquisition of syntactic and semantic development.

Programs of Oral Discussion

In contrast to many of the language development programs which are behavioristically oriented and have a skills program based on repetition drills, there are many other programs which emphasize meaningful discussion and conversation. The latter programs emphasize another view of the adult input into the language development. Instead of the adult serving as a model to be imitated, the adult serves to develop good attitudes of warm interpersonal interaction and his questions deepen the level of thinking involved.

The view of these developmental programs is expressed by Lindberg who says, "We provide opportunity for much oral expression in our classrooms or else we must admit that we are willing to settle for less than the best in reading and writing." She suggests further that the

child needs to hear his own voice and to become aware of himself with persons who listen to him and from whom he gets reactions. She adds that the ability of a teacher to ask appropriate questions contributes to developing depth in discussions and that the quality of the questions raised probably indicates the depth of thinking more than the quality of the answers.

Blackman, in discussing conversation as a skill, speaks of the need to help children in the art of conversation — two-way communication with others.64 She indicates five ways that conversation can be developed: (1) by setting a good example through the teacher's attitude, (2) by maintaining warm personal relationships for the majority of a child's experiences, (3) by elevating the importance of questions, (4) by direct teaching of roleplaying to encourage conversation as a social tool, and (5) by encouraging parents to develop the habit of conversation with their children.

Niemann also notes the importance of parents' conversations with their children.65 She says that there is a great positive relationship between the participation of the parents in oral activities and the quality of the language used by the child. She adds that children can be helped to observe, to question, and to attempt thoughtful explanations.


Niemann suggests that the telling time in lower grades and its counterpart in the intermediate grades have merit if teachers keep some basic principles in mind. "The telling time affords one of the best opportunities for developing the oral communication skills."

Telling time or sharing, however, too often degenerate to the point where children stand and show whatever they have brought with very little verbalization. Their sharing is often just monosyllabic responses to their teacher's questions. Stroebel suggests seven ways to improve the effectiveness of Telling Time. She says that (1) the teacher should use the time to discover which children need help in overcoming timidity, speech difficulties, choosing what to talk about, and overcoming possessiveness; (2) it should occupy a flexible and less frequent place in the schedule as the year goes on; (3) the teacher should suggest observations which can be made to and from school and provide an informal setting for sharing; (4) the periods should be limited in time and random participation should be discouraged; (5) the teacher should give undivided attention to the period; (6) the teachers and children should evaluate themselves now and then; and (7) the teacher should be continuously aware that the Telling Time probably provides the best opportunity in the day's program to develop skills in oral communication.

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66Ibid., p. 818.

A more recent article on sharing suggests some further possibilities for the period. Cowe notes that "Sharing happenings can become points of departure for lead-ons to many content areas. ...The teacher who listens carefully and interacts, who considers a child's ideas and actions important, sets a much needed model for socialized discussion. She also notes that the teacher can ask questions that will stimulate others to think about the child's report and his activity and that she can help focus thinking.

A common strand in all of the articles on discussion, conversation, and Show and Tell is the emphasis on the teacher's role in influencing the quality of the oral language activity involved. This responsibility often comes down to the need for the teacher to ask questions -- questions that will deepen the quality of the discussion and extend experience.

In an article on questioning, Cazden states that specific curricula in inquiry-training should be of greatest value in classrooms where children have plenty of opportunities to ask questions about topics of interest to them and to use these questions as the basis for their school work. In planning educational programs with child language in mind, "with respect to questions, this has two quite different aspects: (a) attempts to teach children to ask more productive questions, and

(b) attempts to change what happens in the classrooms so that more of children's learning will be based on questions which they themselves ask rather than on questions which are asked by the teacher.\textsuperscript{69}

\textbf{Research Studies Using Oral Discussion}

Two studies based on programs of oral discussion or conversation are reported for elementary school or nursery school age children. Although both focused on slightly different aspects of discussion and language development, they share a common point-of-view.

Reihm investigated what changes in culturally disadvantaged pupils' language development would result when pupils were provided with a program which involved daily interaction with their teacher focused on a variety of their own experiences, interests, and needs.\textsuperscript{70} He set up one experimental group and one control group, each containing three boys and three girls from nine first grade classrooms in three schools located in disadvantaged neighborhoods. The experimental group received additional adult interaction in the form of conversation for twenty minutes a day for approximately six months. Five measures of language development were checked from pretest and posttest data of


audio tape recordings of verbal interaction in each of the experimental and each of the control groups. The five measures of language development used were the following: (1) increase in communication length, (2) gains in the number of communication units, (3) increase in the mean number of words between terminal silences, (4) decrease of the 'language mazes ratio' in relation to communication units, and (5) increase in the diversity of vocabulary. Complete data for forty-eight experimental subjects and forty-seven control subjects revealed that "Providing the subjects of the investigation with a program of supplementary verbal interactional experiences with their teacher in the form of conversation focused on a variety of pupils' interests, did not produce significant gains in oral language development."  

The second study involved pre-kindergarten and kindergarten children at the Center for Innovation in Education at the State University College at Brockport, New York and was reported by Drderk.  

Four experiments using different kinds of materials to prompt conversation and discussion from the children were conducted. The first experiment involved nine photographs of animals which were displayed on the bulletin boards from the time the children came to school in September until October. These 5" X 7" photographs were in the view of forty-five

71 ibid.

children during that time period. Three of the photographs were mixed with three others of the same type which had not been displayed and the children were asked to identify which had been displayed. The children were unsuccessful in identifying them and the pictures also elicited very little talk.

The second experiment involved 8\" X 10\" photographs of the children at work and at play. These elicited even less talk and, in fact, the children often rejected pictures of themselves as well as of others. The third experiment used pictures of neutral subjects involved in some sort of problem. For example, in one picture a boy and a girl were struggling over a book; in another two children were running away from a younger child. Thirteen children identified the problem in the first case and twelve of them thought their mother or teacher would come and solve the problem, while two children did not respond. In the second example none of the children could identify the problem.

The fourth experiment involved introducing the children to other materials to elicit conversation and discussion. These included blocks, a terrarium, magnets, and rhythm instruments. These objects worked better than any of the picture stimuli. The author comments that with these objects the key is "guiding perceptions toward the differentiating characteristics of each while providing a label for each characteristic."\(^73\) He also notes that "it appears with some

\(^73\) ibid., p. 61.
certainty that children need to acquire first a certain level of sophistication in interpreting pictures. They need to learn how to look for cues in a picture, and they need a background of picture cues.\textsuperscript{74}

These studies indicate the problems in eliciting discussion and conversation with pre-school, kindergarten and first grade children. They do, however, offer some clues as to things which might facilitate development of a more workable program in oral discussion. The major cue is that children need help in focusing on pictures or objects and that their interests may exceed their everyday experiences and concerns. The studies also point to the problems in measuring language development. The Drderk report used no instrumentation and simply reported, presumably from analysis of anecdotal records, which stimuli served to get children responding. The Riehm study involved analysis of audio tape recordings of the groups studied according to rather gross developmental patterns. It seems possible, in light of the emphasis on oral discussion recommended by authorities in early childhood education, that a program of oral discussion could be developed which would measurably affect children's language and vocabulary development. The present study attempted to do this in the second experimental treatment with its emphasis on questioning techniques and uses of cues in pictures and other visual media.

\textsuperscript{74}ibid., p. 56.
Although research evidence is limited, the potential of oral discussion in the primary classrooms to develop child language is suggested by both authorities in primary education and by the theory of acquisition.

Summary

The adult's role in facilitating the acquisition of syntactic structures and vocabulary is supported by a number of studies, although the determination of what precise role adult input plays in acquisition is not clear. The acquisition processes of syntax and semantics follow similar developmental patterns as the child draws upon his linguistic environment to progressively amend his language until it is similar to the adult language he is exposed to. There are, then, two main aspects of adult language that assume importance: (1) the language data available in the child's environment and (2) the adult response to the child's use of language.

Mature language development in syntax is reflected by an increase in complexity -- both in the number of structures used and in the variety of structures used. Increasing maturity in vocabulary is shown in the variety of words understood and in the match of the child's meaning for a word with the adult's meaning.

Authorities in literature and language development have suggested that listening to children's literature and participating in various oral discussion activities will facilitate mature language development. Although research is somewhat limited, there are indications that they may indeed effect changes in acquisition.
CHAPTER III

METHODS OF PROCEDURE

This study was designed to examine the effects of two kinds of adult language input on the language development of primary age children as revealed in vocabulary and syntactic maturity and to develop a measure of that syntactic maturity. One part of the adult-child contact is the language data provided by the adult while the other part is the opportunity for using language and getting feedback from the adult.

Two experimental programs were developed to provide this contrast at kindergarten, first grade, and second grade. The planned literature program emphasized an environment rich in verbal input through reading and discussion of children's literature selected from recommended books for the variety of vocabulary items and for the syntactic complexity of language. The sharing-discussion program emphasized children's language output by involving them in talking about various topics and problems. The adult language was minimized in this treatment by limiting the adult input to setting the conditions for talk and providing minimal guidance through questioning. A third group, a no-treatment control group, served as a check on the natural maturation of the children and as a check on regular classroom practices which might affect syntax and vocabulary over the experimental period. The
data was analyzed also for differences between sexes and the possible interaction effects of the two treatments, the three grade levels, and sexes.

Selection and Description of Sample

The fifteen classrooms which were involved in this study are located in four schools in the Madison Local School District in Franklin County, Ohio. These schools were selected from those in the district because of their proximity to each other and because of the similar populations they serve. The principals of each building designated one kindergarten, one first grade, and one second grade classroom to be involved in the experimental program. The three no-treatment control group classrooms were selected after the treatments were assigned from the sharing-discussion schools. This was done in order to avoid possible contamination since the literature treatment could so easily be duplicated by other teachers.

Two schools had classes in the literature program and the other two had classes participating in the sharing-discussion program. Data on the parental occupations was secured from the children's cumulative record folders to determine socioeconomic status and the schools were then paired to minimize socioeconomic differences. One pair of schools was randomly assigned to the literature program, and the other pair was assigned to the sharing-discussion program.

The fathers' occupations were classified into nine major categories according to the scheme in the Dictionary of Occupational Titles.75 The

distribution of the fathers' occupations in these categories is shown in Table 1. The fourth category -- farming, fishery, forestry -- was eliminated since there were no fathers in these occupations.

<table>
<thead>
<tr>
<th>Occupational Classifications</th>
<th>Treatment Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Literature</td>
</tr>
<tr>
<td>0-1 Professional, technical, and managerial</td>
<td>41</td>
</tr>
<tr>
<td>2 Clerical and sales</td>
<td>18</td>
</tr>
<tr>
<td>3 Service</td>
<td>9</td>
</tr>
<tr>
<td>5 Processing</td>
<td>9</td>
</tr>
<tr>
<td>6 Machine trades</td>
<td>20</td>
</tr>
<tr>
<td>7 Bench work</td>
<td>14</td>
</tr>
<tr>
<td>8 Structural work</td>
<td>26</td>
</tr>
<tr>
<td>9 Miscellaneous</td>
<td>20</td>
</tr>
</tbody>
</table>

$x^2 = 9.8031 \quad 14 \text{ df} \quad p < .05$

An eight by three chi square analysis revealed no significant difference between the three groups at the .05 level.

**Experimental and Control Treatments**

The two experimental treatments consisted of thirty-six lessons presented over a twelve week period from September 1971 to December 1971. Six pairs of undergraduate students in Early and Middle Childhood Education who were in their senior year worked with the children in their classrooms to increase the adult-child ratio. These students
met with the investigator once a week for a two-hour seminar to prepare the lessons. Each pair of students worked with one classroom in the literature program and one classroom in the sharing-discussion program.

**Personnel**

The twelve undergraduate students who worked with both experimental programs were selected from those enrolled in the introductory education courses during Spring Quarter or Summer Quarter of 1971. Teachers of those courses were asked to recommend students who were both capable and reliable. These students would be completing their senior year during the 1971-72 school year. They enrolled during the period of the experimentation in a group seminar for credit.

These students worked in pairs so that they could work with half of each classroom in various groupings to provide for more interaction in the smaller group situations. Children in the classrooms were re-grouped every two or three lessons.

**Literature Program**

Thirty-six books were selected to be read and discussed with the children during the experimental period. Planning of lessons emphasized developing interest in the book and discussion centered around an aspect of the book as a piece of literature and highlighting the vocabulary within the context of the book.
Book Selection

Fifty books were selected for examination from those which are often recommended for reading aloud to early elementary school age children. Dr. Charlotte S. Huck, co-author of *Children's Literature in the Elementary School* (Holt, Rinehart and Winston, Inc., 1968), consulted with the investigator in this phase of the selection. This original selection was made to secure literature of high quality that would be appropriate for reading aloud to children from five to eight years old.

Selection of the thirty-six books from this original group of fifty was made by taking the first twenty sentences in each book as a sample for analysis. This analysis consisted of a measure of syntactic complexity through T-unit length and a measure of vocabulary difficulty.

**Syntactic complexity.** The T-unit is a minimal terminable unit or communication unit which separates sentences or utterances into main clauses with all subordinate clauses. Researchers using this measure have found it to be a good index of syntactic complexity.\(^7^6\) The sample text from each of the fifty books was divided into T-units, verified by Dr. Sharon E. Fox, and an average T-unit length established for each sample. These were then rank ordered.

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**Vocabulary difficulty.** The difficulty of vocabulary in the fifty samples was measured by checking each word in each sample against "A List of 1400 Words Known by 75% or More of First Grade Children in the Enrichment Program of the Columbus (Ohio) Public Schools" developed by Dale and Schuh.77 Then the percentage of words not on this list was established and the fifty book samples were ranked on percentage of words not on the list. Four assumptions were used in this process: (1) if the singular form of a regular noun appeared, knowledge of the plural and possessive forms was assumed; (2) if the infinitive of a regular verb appeared, knowledge of the present tense forms, the past tense forms and the present participle was assumed; (3) if a contracted form appeared, knowledge of its parts was assumed; and (4) the past tense forms of irregular verbs was not assumed from an infinitive or present tense form.

The rankings for syntactic complexity and vocabulary difficulty were combined and the top thirty-six books in the combined ranking were chosen to be used in the literature program. Table 2 lists these rankings.

77Dale and Schuh, "A List of 1400 Words."
<table>
<thead>
<tr>
<th>Combined Rank of Difficulty</th>
<th>Author and Title</th>
<th>T-unit Rank</th>
<th>Mean T-unit Length</th>
<th>Voc. Rank</th>
<th>% Words not on List</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Burton-Mike Mulligan and His Steam Shovel</td>
<td>3</td>
<td>15.82</td>
<td>2</td>
<td>31.6%</td>
</tr>
<tr>
<td>2nd</td>
<td>Zemach-Salt</td>
<td>2</td>
<td>15.95</td>
<td>6</td>
<td>29.8%</td>
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<tr>
<td>3rd</td>
<td>Anderson-The Emperor's New Clothes</td>
<td>1</td>
<td>18.19</td>
<td>19</td>
<td>24.2%</td>
</tr>
<tr>
<td>4th</td>
<td>Palmer-The Three Billy Goats Gruff</td>
<td>18</td>
<td>11.13</td>
<td>4</td>
<td>31.0%</td>
</tr>
<tr>
<td>5th</td>
<td>Galdone-The Three Wishes</td>
<td>10</td>
<td>12.95</td>
<td>13</td>
<td>25.8%</td>
</tr>
<tr>
<td>6th</td>
<td>Lent-Pistachio</td>
<td>13*</td>
<td>12.00</td>
<td>12</td>
<td>26.1%</td>
</tr>
<tr>
<td>7th</td>
<td>Tresselt-Hide and Seek Fog</td>
<td>16</td>
<td>11.39</td>
<td>10</td>
<td>28.2%</td>
</tr>
<tr>
<td>8th-9th</td>
<td>Lent-John Tabor's Ride</td>
<td>22</td>
<td>10.81</td>
<td>5</td>
<td>30.2%</td>
</tr>
<tr>
<td>8th-9th</td>
<td>Smith-Long Ago Elf</td>
<td>12</td>
<td>12.15</td>
<td>15</td>
<td>25.5%</td>
</tr>
<tr>
<td>10th</td>
<td>Titus-Anatole</td>
<td>27</td>
<td>10.16</td>
<td>1</td>
<td>32.8%</td>
</tr>
<tr>
<td>11th</td>
<td>Ness-Josefina February</td>
<td>7</td>
<td>13.20</td>
<td>22</td>
<td>23.7%</td>
</tr>
<tr>
<td>12th-14th</td>
<td>Kahl-Plum Pudding for Christmas</td>
<td>28</td>
<td>10.11</td>
<td>3</td>
<td>31.3%</td>
</tr>
<tr>
<td>12th-14th</td>
<td>Yashima-Crow Boy</td>
<td>5</td>
<td>14.07</td>
<td>26</td>
<td>23.1%</td>
</tr>
<tr>
<td>12th-14th</td>
<td>Ward-The Biggest Bear</td>
<td>4</td>
<td>14.85</td>
<td>27</td>
<td>22.5%</td>
</tr>
<tr>
<td>15th</td>
<td>Freeman-Dandelion</td>
<td>23</td>
<td>10.78</td>
<td>14</td>
<td>25.7%</td>
</tr>
<tr>
<td>16th</td>
<td>Ness-Mr. Micca</td>
<td>14</td>
<td>11.52</td>
<td>24</td>
<td>23.2%</td>
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<tr>
<td>17th</td>
<td>Fatio-The Happy Lion</td>
<td>11</td>
<td>12.45</td>
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<td>21.7%</td>
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<tr>
<td>18th</td>
<td>McCloskey-Blueberries for Sal</td>
<td>9</td>
<td>13.08</td>
<td>32</td>
<td>19.2%</td>
</tr>
<tr>
<td>19th</td>
<td>Tresselt-A Thousand Lights and Fireflies</td>
<td>6</td>
<td>13.35</td>
<td>39</td>
<td>17.3%</td>
</tr>
<tr>
<td>20th</td>
<td>Bishop-The Five Chinese Brothers</td>
<td>15</td>
<td>11.42</td>
<td>31</td>
<td>20.1%</td>
</tr>
<tr>
<td>21st-23rd</td>
<td>Kahl-The Dutchess Bakes a Cake</td>
<td>40</td>
<td>9.05</td>
<td>7</td>
<td>29.6%</td>
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<tr>
<td>21st-23rd</td>
<td>Caudill-A Pocketfull of Cricket</td>
<td>13*</td>
<td>12.00</td>
<td>34</td>
<td>18.8%</td>
</tr>
<tr>
<td>21st-23rd</td>
<td>Turkle-Obadiah The Bold</td>
<td>38</td>
<td>9.18</td>
<td>9</td>
<td>28.3%</td>
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<tr>
<td>24th</td>
<td>Fisher-Listen, Rabbit</td>
<td>19</td>
<td>11.10</td>
<td>29</td>
<td>21.1%</td>
</tr>
<tr>
<td>25th-26th</td>
<td>Jucker &amp; Ziegler-Squaps the Moonling</td>
<td>32</td>
<td>9.79</td>
<td>18</td>
<td>24.3%</td>
</tr>
<tr>
<td>Date</td>
<td>Title</td>
<td>Brand</td>
<td>Price</td>
<td>Sales</td>
<td>Rank</td>
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<td>--------------------------------------------</td>
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<tr>
<td>25th-26th</td>
<td>Thayer-The Blueberry Pie Elf</td>
<td></td>
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<tr>
<td>27th-28th</td>
<td>Lionni-Frederick</td>
<td></td>
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<tr>
<td>27th-28th</td>
<td>Freeman-Corduroy</td>
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<tr>
<td>29th</td>
<td>Chaconas-The Way The Tiger Walked</td>
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<tr>
<td>30th-31st</td>
<td>Burton-The Little House</td>
<td></td>
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<tr>
<td>30th-31st</td>
<td>Massie-Dazzle</td>
<td></td>
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<tr>
<td>32nd-33rd</td>
<td>Holl-The Runaway Giant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32nd-33rd</td>
<td>McCloskey-Make Way for Ducklings</td>
<td></td>
<td></td>
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<tr>
<td>34th-35th</td>
<td>Binzen-Miguel's Mountain</td>
<td></td>
<td></td>
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<tr>
<td>34th-35th</td>
<td>Seuss-And To Think That I Saw It On</td>
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<tr>
<td>36th</td>
<td>Zion-Harry The Dirty Dog</td>
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<tr>
<td>37th</td>
<td>Seuss-McElligot's Pool</td>
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<tr>
<td>38th</td>
<td>Udry-What Mary Jo</td>
<td></td>
<td></td>
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<tr>
<td>39th</td>
<td>Armour-Animals on The Ceiling</td>
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<tr>
<td>40th</td>
<td>Bemelmans-Madeline</td>
<td></td>
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<tr>
<td>41st</td>
<td>Zemach-Hail Soup</td>
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<td></td>
</tr>
<tr>
<td>42nd</td>
<td>Gag-Millions of Cats</td>
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<td></td>
</tr>
<tr>
<td>43rd</td>
<td>Lindgren-The Tomten</td>
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<tr>
<td>44th</td>
<td>Hill-Evan's Corner</td>
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<tr>
<td>45th</td>
<td>Brown-Stone Soup</td>
<td></td>
<td></td>
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<tr>
<td>46th</td>
<td>Hoban-A Baby Sister</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>47th</td>
<td>for Frances</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>48th</td>
<td>Scott-Sam</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49th</td>
<td>Garelick-Where Does The Butterfly Go When It Rains?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50th</td>
<td>Bourne-Emilio's Summer Day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Preston-Monkey in the Jungle</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Indicates tied ranking
Program

Lesson plans for the first twelve books were prepared by the investigator and discussed with the students who would be using them. The remaining lesson plans were developed by the college students in conjunction with the investigator.

The discussion for each of the books centered on three main parts: questions during reading to focus attention on important parts and to seek predictions and involvement in listening to the story; questions or activities after reading to highlight some aspect of the story; and vocabulary items that might need explanation or focus. For example, in *Harry the Dirty Dog* by Gene Zion three questions were asked during the reading: (1) p. 1 - What do you think he's going to do with that brush? (2) p. 15 - Why doesn't his family recognize him? What do you think he'll do next? (3) p. 21 - What do you think he has dug up? Why is he happy? What is he going to do? After reading the story the questions and activity focused on the sequence of events in the plot development and on implied meaning. Children were asked about major events in the story before trying to re-tell it.

(1) Why did Harry run away from home? When did he decide to go back home? How did he feel when his family didn't recognize him? What did he do about it at first? What made them finally recognize him?

Two other questions pursued the meaning of the ending. (1) Do you think Harry will ever get dirty again? Why? Is there a clue in the story? and (2) Has Harry really changed? Why do you think so? Three words were selected for discussion: _clever_ (other words that say this),
dig furiously (other ways to describe digging), and slept soundly
(other ways to sleep). Several other plans for the literature program
will be found in Appendix C.

Sharing-discussion Program

The planning with the college students for the alternate treatment
emphasized three facets of sharing and discussion: questioning
techniques, interaction between children which would minimize teacher
language, and activities or topics to be used.

In developing techniques of questioning, the Cunningham Model of
Questioning was used to examine various types of questions. In this
scheme questions are divided into two major categories: broad and
narrow questions. Broad questions are then divided into two sub-
categories labeled divergent or evaluative. Narrow questions might be
either cognitive-memory or convergent questions. Students were trained
to identify and create questions of the various types. They were also
given practice in noting the types of response which resulted from
particular kinds of questions.

Four strategies for using questions were stressed: (1) ask fewer
questions with a balance between narrow and broad questions, (2) try to
balance the participation by calling on children who volunteer and those

78Roger T. Cunningham, "Developing Question-Asking Skills," in
Developing Teacher Competencies, ed. by James S. Weigand (Englewood
who don't, (3) use questions that permit and encourage several children to respond, and (4) improve the responses by using prompts or additional questions that cause the pupil to correct, clarify, or extend his answer.

Interaction between the children was developed in three main ways. First, the children were re-grouped every two or three lessons. Grouping by as many different means as possible was suggested. Some of the possibilities explored were grouping by color of clothes, eyes, or hair; grouping by the children's location in the room; grouping by sex; grouping by birthday months; grouping by the choice of the persons who were sharing or by the choice of the children who would be with the sharer.

The second means of encouraging interaction was by getting children to ask other children questions. The usual first step in this process was for the college student to say, "Who would like to ask Robert what other things his truck could be used for?" A later step might be for the student to say, "Who would like to ask about its uses?" Along with this type of direction or instruction, the children were encouraged to ask their own questions and those questions that got a particularly good response were praised.

The third facet in developing the interaction between children was through encouraging the children to respond with similar experiences or with personal experiences tangential to the discussion. The college students were instructed to wait five to ten seconds after a response before asking another question. This in itself seemed to encourage further participation.
The other major area of planning involved identifying topics for discussion and activities promoting discussion in addition to trying to improve the sharing aspect of this program. Since sharing often degenerates into a dialog between the child sharing and the teacher with monosyllabic answers on the child's part, several ideas were explored. The questioning technique itself served as one means to extend the discussion. Another means was through the interaction of other children participating in an individual's sharing. The third means involved guidance on what types of things might be shared on a particular day. The children were encouraged to bring things which they had collected or made rather than toys or object-gifts. Their involvement in what they brought to share appeared to extend the possibilities for discussion.

A variety of activities in the discussion area were used. One was dramatic role-play based on both imaginary or real situations. These were very short and were planned with the children. They were based on a situation from a picture or from some real life experience. Another activity was "Start-a-story"; in this the college student would start a story and then ask the children to say what would happen next in it. One child would actually carry the story until the college student would say, "And then ..." and call on another child to carry it on. Another activity was the discussion group. This activity focused mainly on problems and experiences in real life situations. Topics included favorite foods, television programs, games; family activities, shopping, halloween costumes; personal activities, hobbies, things they do after school, in the summer or on weekends. The other main activity used in
this program, and the most productive, was the use of pictures as a stimulus for discussion. The pictures were used for description, in start-a-story, as a basis for relating personal experiences, and also in a kind of problem-solving discussion. For the latter, pictures were chosen which involved some incongruity. They were found to be very effective in promoting real discussion and related well to the cognitive-growth aspects of the program. Some examples of these pictures are: an elephant holding a typewriter in his trunk, a race driver sitting in front of his car at dawn, a table set with china and silver in the center of Madison Avenue, or some men in business suits flying kites downtown.

No-Treatment Control Group

One class at each grade level -- kindergarten, first grade, and second grade -- was selected from the pair of schools involved in the sharing-discussion program to serve as the control group. Arrangements for testing them were made just prior to the testing period so that the classroom teachers would make no special arrangements or lessons for them. Although the personnel working with some other classes had been in their building all term, they saw the research project as only an experiment in teacher-training involving the college students. This was done to avoid as much as possible any confounding of the two treatments.
Testing Procedures and Instruments

Design and Analysis

Three groups were set up at each grade level, kindergarten, first grade, and second grade. One group was randomly assigned as experimental group one and received the literature program; a second group was randomly assigned as experimental group two and received the sharing-discussion program; and the third group served as the no-treatment control group.

Groups were examined for similarity of socio-economic status according to fathers' occupations, and all four schools involved were in the same school district and within that district were in close proximity to one another. The design was a post test only control group design.

The independent variables were: (1) the literature program emphasizing rich verbal input and (2) the sharing-discussion program emphasizing verbal output. Dependent variables were: (1) the acquisition of syntactic structures and (2) the acquisition of vocabulary.

Data was analyzed using three-way analysis of variance to test for significance and interaction effects among treatments, grade level, and sex. The S-method developed by Scheffe\textsuperscript{79} was used to test comparisons of means where the F test indicated significance.

Testing Program

Both tests, acquisition of vocabulary and acquisition of syntactic structures were given during the ten-day period immediately following the experimental period. Both tests were given to children individually by the personnel who had worked with the children during the twelve week series of lessons. One set of schools was tested primarily on Monday and Wednesday and the other on Tuesday and Thursday in an effort to secure scores for as many children as possible in spite of short-term absences. Control group classes were tested during the same week as the experimental classes.

All personnel involved in the testing followed the same testing procedure. The directions for this procedure are in Appendix B.

Vocabulary Acquisition

To get a measure of vocabulary comprehension with children of these ages it seemed necessary to use a picture test. The Peabody Picture Vocabulary Test by Lloyd M. Dunn published by American Guidance Service, Inc., 1965 edition was selected.

This test is often used as an intelligence test particularly for mentally retarded or physically handicapped children. This is done by converting the raw scores on vocabulary into mental ages or into intelligence quotients. It is, however, basically an individually administered test of oral vocabulary comprehension. For this study raw scores were used.

There are two forms, A and B, of the Peabody Picture Vocabulary Test and since they were packaged in equal amounts of each form and the
equivalence of the two forms is from $r = 0.83$ to $r = 0.97$, both forms were used, making sure that they were administered randomly to children in each classroom tested.

In using the test to measure oral vocabulary comprehension, the validity of the test rests on its content validity.

Content validity was built into the test when a complete search was made of Webster's New Collegiate Dictionary (G & C Merriam, 1953) for all words whose meanings could be depicted by a picture. ...Since a good cross section was obtained of words in common use today in the United States, and since care was taken to keep the final selection of response and decoy items unbiased, the final product is assumed to meet adequate standards for a picture vocabulary test.

Syntactic Structures Acquisition

After making a careful search and considering the possibilities for testing growth in acquisition of syntactic structures, the investigator decided the most appropriate means of measuring this variable would be a repetition test of structures likely to be acquired during the early elementary school years.

Psycholinguistic research indicates a trend of increasing complexity through both more structures used and more kinds of structures with increasing age or linguistic maturity. This research has identified


81 Ibid., p. 32.
certain specific syntactic structures that are acquired during or after elementary school ages. These items were used as a basis for developing the test. The repetition technique has been used frequently and appears productive.

**Basis for Test**

Most of the observations of language acquisition have been based on an analysis of samples from children's oral language. This has been particularly valuable in studying the language of very young children and in looking at developmental trends across age groups. It does, however, present several problems in examining syntactic structure acquisition in more mature children.

First there is the question of whether a child's performance indicates his level of linguistic competence. Menyuk states that there is contradicting evidence in the limited literature as to whether there are either differences or lags between the child's comprehension grammar and his production grammar and whether the child's performance indicates his level of competence or exceeds his performance.\(^\text{82}\)

Secondly, the structures which may be acquired during the early elementary school years are rather infrequently used structures. This suggests that unless a very large sample is taken in a variety of linguistic situations, the observer may well not find particular structures even though the child may normally produce them in a given situation.

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\(^{82}\)Menyuk, *Acquisition and Development of Language*, p. 123.
The thrust of this study was to determine if the acquisition of linguistic structures would be affected by programs enriching the language 'data' of the child or by enriching the opportunities for using language and getting feedback from an adult. Therefore the interest in acquisition of structure was primarily in terms of linguistic competence.

Evaluation of syntactic competence, in recent research, has been limited primarily to two techniques; picture identification and repetition of sentences. ... However, the use of picture stimuli obviously limits the set of structures to be assessed to those that are picturable. ... Therefore, in recent studies, the technique of repetition has been used. This technique allows for the testing of a range of syntactic structures.\textsuperscript{83}

Slobin and Welsh examined the process involved in repeating a sentence and suggest that "... in repeating a sentence, one must filter it through one's own productive system. To use Piaget's terminology, a sentence when recognized, is assimilated to an internal schema, and when reproduced is constructed in terms of that schema."\textsuperscript{84} They conclude by saying, "... we believe that elicited imitation is a useful probe for revealing linguistic competence."\textsuperscript{85}

**Identification of Structures**

Through a careful search of the literature on syntactic acquisition, eighteen structures were identified for study as possible items to

\textsuperscript{83}Ibid., p. 148.

\textsuperscript{84}Slobin and Welsh, "Elicited Imitation," p. 7.

\textsuperscript{85}Ibid., p. 17.
use in testing syntactic acquisition. These structures are listed in Table 3.

**TABLE 3**

**SYNTACTIC STRUCTURES AND SOURCES IDENTIFIED FOR REPETITION TEST**

<table>
<thead>
<tr>
<th>Structures</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass nouns</td>
<td>Colin Fraser, Ursula Bellugi, and Roger Brown in &quot;Control of Grammar in Imitation, Comprehension, and Production.&quot;</td>
</tr>
<tr>
<td>Unmarked indirect objects</td>
<td></td>
</tr>
<tr>
<td>Comparative adjectives</td>
<td>Jean Berko in &quot;The Child's Learning of English Morphology.&quot;</td>
</tr>
<tr>
<td>Superlative adjectives</td>
<td></td>
</tr>
<tr>
<td>Irregular plural noun forms</td>
<td></td>
</tr>
<tr>
<td>Have used alone</td>
<td>Lee C. Deighton, in &quot;Flow of Thought Through an English Sentence.&quot;</td>
</tr>
<tr>
<td>Introductory adverbs</td>
<td></td>
</tr>
<tr>
<td>Introductory participial phrases</td>
<td></td>
</tr>
<tr>
<td>Modals could, dare and might</td>
<td></td>
</tr>
<tr>
<td>Coordinates with nominals, verbs, or adjectives of but, or, and not</td>
<td>Roy C. O'Donnell, William J. Griffin, and Raymond C. Norris in Syntax of Kindergarten and Elementary School Children: A Transformational Analysis.</td>
</tr>
<tr>
<td>Unmarked adjective clauses</td>
<td></td>
</tr>
<tr>
<td>Introductory adverbs</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 3 (Cont'd.)

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular past tense forms</td>
<td></td>
</tr>
<tr>
<td>Conjunctions with if and so as introductory parts</td>
<td></td>
</tr>
<tr>
<td>An expression of time, subject, verb, an expression of place, and another pattern</td>
<td>Ruth G. Strickland in &quot;The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children.&quot;</td>
</tr>
<tr>
<td>Subject, passive or copulative verb, predicate nominative, and another pattern</td>
<td></td>
</tr>
<tr>
<td>A pattern and subject, verb, indirect object, and direct object</td>
<td></td>
</tr>
<tr>
<td>Present perfect tense with got</td>
<td>Paula Menyuk in &quot;Syntactic Structures in the Language of Children.&quot;</td>
</tr>
<tr>
<td>Present perfect tense with a contracted adverb</td>
<td></td>
</tr>
</tbody>
</table>

Complete references for the sources cited may be found in the Bibliography.

Development of the Test

In the development of the test, several variables were examined. These included length of sentences, vocabulary within test items, and ability of the structures to discriminate. Two or more items were
developed for each structure identified using eleven word sentences and eight word sentences. These were tested with first grade children in May, 1971. The eleven word sentence forms caused such frequent inability to repeat even a meaningful paraphrase of the original sentence that the eight word length was selected. Vocabulary items in each sentence were then revised so that the vocabulary used in the test sentences corresponded to that identified as known to first graders on the Dale-Schuh list.\textsuperscript{86} Proper names were eliminated since they so often distracted the children from the task of repeating the sentence. Three structures were eliminated after the preliminary May testing since they failed to discriminate among children taking the test. These three items were as follows: (1) the conjunctions with \textit{if} and \textit{so} as introductory parts suggested by Menyuk, (2) the present perfect tense with a contracted adverb suggested by Menyuk, and (3) a pattern and subject, verb, indirect object, and direct object suggested by Strickland.

\textbf{Pilot Study Testing}

The revised test with thirty-six items was pilot tested in September 1971. Twenty children in kindergarten, twenty in first grade, and twenty second graders were randomly selected from six classrooms in

\footnote{Dale and Schuh, "A List of 1400 Words."}
the experimental group one schools not involved in the experimental program by using a table of random numbers. The test was administered individually to each child and his errors were recorded by the investigator.

A three point scale of scoring the test was established since the children were sometimes able to repeat the structure itself correctly, but would miss some other part of the sentence. The investigator believes that these errors indicate a level in the acquisition of the particular structure and reflect familiarity with the structure but not complete control of it. This decision was supported by Hatch who noted that "The child then should respond quickly and accurately to any sentence which he feels is grammatical; if the sentence is not grammatical for him, he should take longer and make more errors in the repetition, or he might, instead, correct the sentence." This therefore, a completely correct repetition was scored one point; a correct repetition of the structure with other minor errors was scored a half-point; and inability to repeat the structure correctly, inability to repeat the sentence at all, or a complete garbling of the sentence was scored as no points.

Validity and Reliability

The validity of the sentence repetition test to measure acquisition of syntactic structures rests on its content validity. This was built

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into the test by basing it on linguistic structures suggested by psycholinguistic research and supported by the fact that it does reflect the expected developmental trend by showing increases from kindergarten to first grade to second grade.

Table 4 below shows the mean scores and standard deviations from the pilot testing of sixty children randomly selected from kindergarten, first and second grade.

TABLE 4
LINGUISTIC STRUCTURES REPETITION TEST MEAN SCORES AND STANDARD DEVIATIONS FROM SEPTEMBER, 1971 PILOT TEST

<table>
<thead>
<tr>
<th></th>
<th>Kindergarten</th>
<th>First Grade</th>
<th>Second Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score</td>
<td>17.85</td>
<td>19.50&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22.65&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>7.50</td>
<td>7.97</td>
<td>5.95</td>
</tr>
</tbody>
</table>

<sup>a</sup>difference between kindergarten and first grade is not significant

<sup>b</sup>difference between kindergarten and second grade is significant, $t = 2.24$, $p < .05$, $t_{.05 (19)} = 2.093$.

A t-test indicated that differences between kindergarten and second grade scores were significant at the .05 level of significance since $t = 2.24$ and with nineteen degrees of freedom at $t$-value of 2.093 is required for significance at that level.

The reliability of the test was checked by examining the scoring for each pair of sentences based on the same structure from a randomly selected sample of ten tests at each grade level. A chi square analysis was done to establish reliability. This analysis is reported in Table 5.
### TABLE 5

Chi Square Analysis of Scoring of Paired Sentences From Linguistic Structures Repetition Test Of a Random Sample of Ten Tests at Each Grade Level

<table>
<thead>
<tr>
<th>Observed FREQUENCIES of Points Scored For First Sentence of Each Pair on Same Structure</th>
<th>Observed FREQUENCIES of Points Scored For Second Sentence of Each Pair on Same Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>½</td>
</tr>
<tr>
<td>1</td>
<td>129</td>
</tr>
<tr>
<td>½</td>
<td>28</td>
</tr>
<tr>
<td>0</td>
<td>31</td>
</tr>
</tbody>
</table>

\[ x^2 = 131.91 \quad p < .001. \quad x^2.001(4) = 18.465. \]

Chi square analysis revealed significant differences beyond the .001 level since the chi square equaled 131.91 and with four degrees of freedom a chi square of 18.465 is required for that level of significance.

**Summary**

To investigate two aspects of the adult's input on children's acquisition of syntactic structures and vocabulary was the major purpose of this research. Two experimental treatments were developed. One emphasized the adult's input of language as data for children to process through reading and discussing children's literature; the other emphasized the adult's role in providing feedback for the child when practicing and using his own language through a program of sharing and discussion.
Fifteen classrooms in the Madison Local School District participated in the experiment. Six classrooms -- two kindergarten, two first grade, and two second grade rooms -- took part in the literature program and six other classrooms similarly distributed took part in the sharing-discussion program. One kindergarten, one first grade and one second grade classroom served as no-treatment control group classes. The literature group classes were in two schools in the district and the sharing-discussion and control group classes were in two other schools of equivalent socio-economic status.

Twelve undergraduate students working in pairs administered the experimental programs by participating in one classroom of each treatment. They were trained in a weekly seminar and regularly supervised by the investigator.

Data utilized in examining the influence of the two experimental programs were gathered by two instruments, the Peabody Picture Vocabulary Test and a Linguistic Structures Repetition Test developed by the investigator for this study. The Linguistic Structures Repetition Test is appended in Appendix A.
CHAPTER IV

FINDINGS

The major purpose of this study was to examine the effects of two contrasting experimental treatments which reflect two major facets of the adult's influence on children's language acquisition. The acquisition of syntactic structures and the acquisition of vocabulary were the two variables in the acquisition of language which were tested following the experimental programs working with kindergarten, first grade, and second grade children.

One experimental program, reading and discussion of children's literature, emphasized an environment rich in vocabulary and syntactic structures. The other experimental program, sharing-discussion, emphasized opportunities for using language and getting feedback from the adult. A third group, a no-treatment control group, served as a check on the natural maturation process.

A second purpose of the study was to determine if a test of syntactic structures could be developed which would reflect established developmental trends and be practicable for large numbers of subjects.

Ten null hypotheses were postulated. These will be examined in terms of those pertaining to the two independent variables: (1) the acquisition of syntax and (2) the acquisition of vocabulary. The
hypotheses will be restated with the pertinent data and the interpretation of it immediately following each hypothesis.

**Data on Syntactic Acquisition**

The first hypothesis dealt with the interactions of grade level, treatment, and sex. Then three hypotheses examined differences between experimental and control treatments at the three grade levels in the acquisition of syntax. The other hypothesis examined the developmental trend in acquisition of syntactic structures across the three grade levels.

1. There will be no significant interaction effect of type of program, grade level, and sex on the acquisition of syntactic structures.

Mean scores on the sentence repetition test as a measure of syntactic acquisition by type of experimental program, grade level, and sex are reported in Table 6.

**TABLE 6**

SYNTACTIC STRUCTURES--MEANS BY TREATMENT, GRADE LEVEL, AND SEX

<table>
<thead>
<tr>
<th>Grade and Sex</th>
<th>Control (N=12)</th>
<th>Treatments</th>
<th>Literature (N=31)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kdg. Girls</td>
<td>15.000</td>
<td>(N=23) 16.848</td>
<td>18.548</td>
</tr>
<tr>
<td>Kdg. Boys</td>
<td>12.591</td>
<td>(N=31) 13.177</td>
<td>16.938</td>
</tr>
<tr>
<td>Kdg. Total</td>
<td>13.848</td>
<td>14.740</td>
<td>17.845</td>
</tr>
</tbody>
</table>
TABLE 6 (Cont'd.)

<table>
<thead>
<tr>
<th></th>
<th>(N=12) 21.208</th>
<th>(N=22) 19.818</th>
<th>(N=22) 19.432</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Girls</td>
<td>(N=9) 21.278</td>
<td>(N=24) 21.021</td>
<td>(N=24) 18.688</td>
</tr>
<tr>
<td>1st Total</td>
<td>21.238</td>
<td>20.446</td>
<td>19.044</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>(N=12) 21.125</th>
<th>(N=27) 22.537</th>
<th>(N=33) 23.697</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Girls</td>
<td>(N=15) 23.567</td>
<td>(N=29) 21.948</td>
<td>(N=24) 21.792</td>
</tr>
<tr>
<td>2nd Boys</td>
<td>22.482</td>
<td>22.232</td>
<td>22.095</td>
</tr>
</tbody>
</table>

Multivariate analysis of variance on the scores of syntactic acquisition examined the possible interaction effects. The results of this analysis are reported in Table 7.

TABLE 7

INTERACTION EFFECTS OF TREATMENT, GRADE LEVEL, AND SEX ON ACQUISITION OF SYNTACTIC STRUCTURES

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p less than</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>0.736</td>
<td>0.480</td>
<td>N.S.</td>
</tr>
<tr>
<td>Grade Level</td>
<td>33.377</td>
<td>0.001</td>
<td>.001</td>
</tr>
<tr>
<td>Sex</td>
<td>2.546</td>
<td>0.111</td>
<td>N.S.</td>
</tr>
<tr>
<td>Treatment-Grade</td>
<td>2.073</td>
<td>0.084</td>
<td>N.S.</td>
</tr>
<tr>
<td>Treatment-Sex</td>
<td>0.351</td>
<td>0.704</td>
<td>N.S.</td>
</tr>
<tr>
<td>Grade-Sex</td>
<td>1.396</td>
<td>0.249</td>
<td>N.S.</td>
</tr>
<tr>
<td>Treatment-Grade-Sex</td>
<td>0.570</td>
<td>0.684</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

None of the interactions (1) treatment-grade, (2) treatment-sex, (3) grade-sex, or (4) treatment-grade-sex were significant in the acquisition of syntactic structures. Thus the null hypothesis is accepted that there are no significant interactions of treatment, grade level, and sex.
The three hypotheses dealing with differences among treatments in acquisition of syntactic structure were as follows.

2. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at kindergarten.

3. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to a sharing-discussion program, and those in the no-treatment control group in first grade.

4. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in second grade.

The multivariate analysis of variance on syntactic acquisition scores of the subjects in the study did not reveal significant treatment-grade level interaction. The F value was 2.073 with p less than 0.084. This does not meet the required .05 level and so the null hypotheses are accepted that there are no significant differences among treatment groups at kindergarten, first grade, or second grade.

The final hypothesis dealing with syntactic acquisition examined the developmental trend across the three grade levels.

5. There will be no significant differences in acquisition of syntactic structures between kindergarten, first grade, and second grade.

The multivariate analysis of variance revealed significant differences between grade levels at the .001 level. The S-method
developed by Scheffe was used to test comparisons of the mean scores. The results of the S-method tests are reported in Table 8.

**TABLE 8**

**INTER-GRADE LEVEL COMPARISONS ON ACQUISITION OF SYNTACTIC STRUCTURES**

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Mean Difference</th>
<th>Scheffe Comparative Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kdg. and 1st</td>
<td>4.143</td>
<td>4.767**</td>
</tr>
<tr>
<td>Kdg. and 2nd</td>
<td>6.671</td>
<td>8.109**</td>
</tr>
<tr>
<td>1st and 2nd</td>
<td>2.528</td>
<td>2.948*</td>
</tr>
</tbody>
</table>

**p < .01  **p < .05  CR<sub>.01</sub> = 3.053  CR<sub>.05</sub> = 2.458

S-method tests revealed significant differences between the kindergarten mean score of 15.879 and the first grade mean score of 20.022 at the .01 level of significance. The difference between the first grade mean score of 20.022 and the second grade mean score of 22.550 was significant at the .05 level, and the difference between the kindergarten and second grade mean scores was significant at the .01 level and less.

**Data on Vocabulary Acquisition**

The first of the five hypotheses dealing with vocabulary acquisition examined the interactions of grade level, treatment, and sex. The next three hypotheses tested the effects of the three treatments at each grade level. The final hypothesis examined grade level differences in acquisition of vocabulary.
6. There will be no significant interaction effect of type of program, grade level, and sex on the acquisition of vocabulary.

Mean scores on the vocabulary test as a measure of its acquisition are reported by type of experimental program, grade level and sex in Table 9.

**TABLE 9**

**VOCABULARY—MEANS BY TREATMENT, GRADE LEVEL AND SEX**

<table>
<thead>
<tr>
<th>Grade and Sex</th>
<th>Control</th>
<th>Sharing-Discussion</th>
<th>Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kdg. Girls</td>
<td>(N=13) 50.846</td>
<td>(N=24) 53.000</td>
<td>(N=32) 53.969</td>
</tr>
<tr>
<td>Kdg. Boys</td>
<td>(N=11) 52.818</td>
<td>(N=31) 53.839</td>
<td>(N=24) 56.458</td>
</tr>
<tr>
<td>Kdg. Total</td>
<td>51.750</td>
<td>53.473</td>
<td>55.036</td>
</tr>
<tr>
<td>1st Girls</td>
<td>(N=13) 57.231</td>
<td>(N=22) 56.955</td>
<td>(N=24) 57.875</td>
</tr>
<tr>
<td>1st Boys</td>
<td>(N=10) 60.800</td>
<td>(N=25) 60.120</td>
<td>(N=25) 57.400</td>
</tr>
<tr>
<td>1st Total</td>
<td>58.783</td>
<td>58.637</td>
<td>57.633</td>
</tr>
<tr>
<td>2nd Girls</td>
<td>(N=12) 63.167</td>
<td>(N=26) 62.154</td>
<td>(N=32) 61.750</td>
</tr>
<tr>
<td>2nd Boys</td>
<td>(N=15) 64.733</td>
<td>(N=29) 65.586</td>
<td>(N=24) 65.958</td>
</tr>
<tr>
<td>2nd Total</td>
<td>64.037</td>
<td>63.964</td>
<td>63.553</td>
</tr>
</tbody>
</table>

A three-way multivariate analysis of variance on the vocabulary test scores examined the possible interaction effects. The results of this analysis is reported in Table 10.
TABLE 10
INTERACTION EFFECTS OF TREATMENT, GRADE LEVEL, 
AND SEX ON ACQUISITION OF VOCABULARY

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p less than</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>0.074</td>
<td>0.929</td>
<td>N.S.</td>
</tr>
<tr>
<td>Grade Level</td>
<td>72.560</td>
<td>0.001</td>
<td>.001</td>
</tr>
<tr>
<td>Sex</td>
<td>10.636</td>
<td>0.001</td>
<td>.001</td>
</tr>
<tr>
<td>Treatment-Grade</td>
<td>1.206</td>
<td>0.308</td>
<td>N.S.</td>
</tr>
<tr>
<td>Treatment-Sex</td>
<td>0.017</td>
<td>0.984</td>
<td>N.S.</td>
</tr>
<tr>
<td>Grade-Sex</td>
<td>0.635</td>
<td>0.531</td>
<td>N.S.</td>
</tr>
<tr>
<td>Treatment-Grade-Sex</td>
<td>0.802</td>
<td>0.525</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

None of the interactions (1) treatment-grade, (2) treatment-sex, (3) grade-sex or (4) treatment-grade-sex were significant in the acquisition of vocabulary. Thus the null hypothesis is accepted that there are no significant interactions of treatment, grade level, and sex.

The hypotheses examining differences between treatments in the acquisition of vocabulary were as follows.

7. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at kindergarten.

8. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at first grade.

9. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at second grade.
The three-way analysis of variance on vocabulary scores did not reveal significant treatment-grade level interaction. The F value was 1.206 with p less than 0.308. This does not meet the required .05 level and so the null hypotheses are accepted that there are no significant differences among treatment groups at kindergarten, first grade, or second grade in the acquisition of vocabulary.

The last hypothesis deals with vocabulary acquisition across the three grade levels.

10. There will be no significant differences in acquisition of vocabulary between kindergarten, first grade, and second grade.

The multivariate analysis of variance revealed significant differences between grade levels at the .001 level. The S-method developed by Scheffe was used to test comparisons of the mean scores, and these are reported in Table 11.

**TABLE 11**

INTER-GRADE LEVEL COMPARISONS OF ACQUISITION OF VOCABULARY

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Mean Difference</th>
<th>Scheffe Comparative Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kdg. and 1st</td>
<td>4.437</td>
<td>5.132**</td>
</tr>
<tr>
<td>Kdg. and 2nd</td>
<td>9.997</td>
<td>12.011**</td>
</tr>
<tr>
<td>1st and 2nd</td>
<td>5.560</td>
<td>6.464**</td>
</tr>
</tbody>
</table>

**p < .01    CR.01 = 3.053.**
The S-method tests of significance revealed significance at the .01 level or less between grade levels. This was true of the difference between the kindergarten mean of 53.815 and the first grade mean of 58.252; between the first grade mean of 58.252 and the second grade mean of 63.812; and between the kindergarten mean of 53.815 and the second grade mean of 63.812. The vocabulary test scores showed a consistent and fairly even increase between grade levels.

Summary of Findings

Acquisition of Syntactic Structures

The acquisition of syntactic structures was tested by a sentence repetition test, the Linguistic Structures Repetition Test, developed by the investigator and based on structures reported in the literature to be acquired after age five. Examination of differences between the mean scores at the three grade levels by the S-method of testing significance revealed a significant increase between kindergarten and first grade at the .01 level and a significant increase between first grade and second grade at the .05 level.

Differences between treatment groups at the various grade levels were not significant, nor were any of the interaction effects significant.

Acquisition of Vocabulary

The acquisition of vocabulary was tested using the Peabody Picture Vocabulary Test as a test of vocabulary comprehension. Multivariate analysis of variance revealed significant differences between grade
levels and the S-method of determining significance revealed significant differences at the .01 level or less between kindergarten and first grade; between first and second grade; and between kindergarten and second grade. The three-way analysis of variance also revealed significant difference between boys and girls in vocabulary acquisition in favor of boys at the .001 level.

There were no significant differences between the treatment groups at the various grade levels and none of the interaction effects were significant.

**Significant Findings**

The criterion measure of syntactic acquisition developed for this study revealed significant differences between kindergarten and first grade at the .01 level and between the first and second grades at the .05 level. The measure of vocabulary acquisition also revealed significant differences between these grade levels at the .01 level and a sex difference favoring boys at the .001 level in vocabulary acquisition.
CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS
FOR FURTHER RESEARCH

Purpose of the Study

The purpose of the study was to examine language acquisition in early primary school children stemming from contacts with verbal adults. The study attempted to determine what differences in acquisition of syntactic structures or vocabulary might result from contrasting two facets of the adult's contribution to the acquisition process. One facet of this contribution is the vocabulary used in appropriate context by the adult and the variety of syntactic structures in the adult language which may serve as language data for the child to process. The other facet is the opportunity for the child to try out his own language with feedback from the adult. These two facets were contrasted with two experimental programs—a literature program emphasizing a mature language environment and a sharing-discussion program emphasizing child language practice.

A secondary purpose of the study was to develop a test of acquisition of syntactic structures that would reflect known developmental trends and be practicable for use in research involving large numbers of subjects.
To examine the effects of the two experimental programs and the development of the test, ten null hypotheses were tested:

1. There will be no significant interaction effect of type of program, grade level, and sex on the acquisition of syntactic structures.

2. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at kindergarten.

3. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at first grade.

4. There will be no significant differences in acquisition of syntactic structures among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group at second grade.

5. There will be no significant differences in acquisition of syntactic structures between kindergarten, first grade, and second grade.

6. There will be no significant interaction effect of type of program, grade level, and sex on the acquisition of vocabulary.

7. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in kindergarten.
8. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in first grade.

9. There will be no significant differences in acquisition of vocabulary among children exposed to a planned literature program, those exposed to the sharing-discussion program, and those in the no-treatment control group in second grade.

10. There will be no significant differences in acquisition of vocabulary between kindergarten, first grade, and second grade.

**Methods and Procedures**

Two experimental programs were developed to provide the contrast between language 'data' provided in the adult's language and the opportunity to practice language with feedback from the adult. Two classrooms at each of the three grade levels, kindergarten, first grade, and second grade, participated in each treatment and another classroom at each grade level served as a no-treatment control group. Twelve undergraduate students in the Early and Middle Childhood Education department at The Ohio State University worked with the classrooms in the study under the direct supervision of the investigator. The students worked in pairs to reduce the ratio of children to adults, and each pair worked at one grade level with both treatment groups. The experimental period lasted twelve weeks with three contacts per week. Testing was completed within a ten day period following the experimental program.
The Sample

The fifteen elementary classrooms involved in the study were in four schools in the Madison Local School District in Franklin County, Ohio. These schools were selected from those in the district because of their proximity to each other and because of their similar population. Schools were paired to minimize socioeconomic differences on the basis of fathers' occupations. No-treatment control group classes were selected from the sharing-discussion schools to avoid contamination from the easily duplicated literature treatment. Principals of each building designated one kindergarten, one first grade and one second grade classroom to participate. A chi square analysis of fathers' occupations revealed no significant socioeconomic difference between the three treatment groups.

Experimental Treatments

In the literature program thirty-six books were selected to be read and discussed with the children during the experimental period. The discussion was minimal and emphasized maintaining interest in the book and then discussing one aspect of the book as a piece of literature. Vocabulary which might not be known was highlighted within the context of the book. The books were selected first for their quality and interest to children within this age group and next on the combined rankings of syntactic complexity through T-unit length and vocabulary difficulty of a sample consisting of the first twenty sentences of each book.
The sharing-discussion program emphasized children's language and minimized adult language in three main ways: questioning techniques designed to elicit more discussion, interaction between children rather than between adult and child, and activities or topics which would promote the children's participation in the discussion. Some of the activities in this treatment were sharing, dramatic role-play based on both imaginary and real situations, start-a-story which involved creation of a chain story by several children, discussion groups focused on problems or the children's own experiences.

Testing Procedures and Instruments

The study was a post-test only control group design. Groups were examined for similarity of socio-economic status on the basis of fathers' occupations with no significant differences found at the .05 level of significance. The independent variables were: (1) the literature program emphasizing rich verbal input and (2) the sharing-discussion program emphasizing verbal output. The dependent variables were: (1) the acquisition of syntactic structures and (2) the acquisition of vocabulary. Data was analyzed using three-way analysis of variance to test for interaction effects among treatments, grade levels, and sexes. The S-method developed by Scheffe was used to test for significance between possible pairs of means where the F test indicated significance within a group of means.

Vocabulary acquisition was measured by using the Peabody Picture Vocabulary Test to test vocabulary comprehension. For this study raw scores were used. The acquisition of syntactic structures was measured
by a sentence repetition test, The Linguistic Structures Repetition Test, devised by the author for this study. Structures tested were identified in the literature as those which may pose problems for children five years old or older. Vocabulary and sentence length were controlled in the test sentences. All testing was individually administered by the adults who had worked with the children in the experimental programs and was completed within a ten-day period following the end of the experimental treatments.

Summary of Findings

The findings of the study relative to the dependent variables of syntactic and vocabulary acquisition were as follows:

Acquisition of Syntactic Structures

1. There were no significant interaction effects of treatment with grade level, treatment with sex, grade level with sex, or treatment with grade level and sex.

2. There were no significant differences in acquisition of syntactic structures among the treatment groups as shown in the treatment-grade level interaction.

3. There were significant differences in acquisition of syntactic structures between grade levels. The increase between kindergarten and first grade was significant at the .01 level as was the increase between kindergarten and second grade; the increase between first and second grade was significant at the .05 level.
Acquisition of Vocabulary

1. There were no significant interaction effects of treatment with grade level, treatment with sex, grade level with sex, or treatment with grade level and sex.

2. The three-way analysis of variance did indicate sex differences in the acquisition of vocabulary significant at the .001 level and favoring boys.

3. There were no significant differences between treatment groups shown in the treatment-grade level interaction.

4. There were significant differences in acquisition of vocabulary between grade levels. Differences between kindergarten and first grade, kindergarten and second grade, and first and second grade were all significant at the .01 level or less.

Conclusions and Discussion

The following conclusions were based upon the findings reported in this study and are related to the acquisition of syntactic structures and the acquisition of vocabulary.

Syntactic Acquisition

One important outcome of this study pertains to the development of the test of syntactic acquisition. It appears from the results of the study that developmental increases in the acquisition of syntactic structures can be measured by the test developed for the study, The Linguistic Structures Repetition Test. Measuring syntactic acquisition has been somewhat problematical with large numbers of subjects since other measures used, such as the T-unit measure, involve analysis of a
sample of oral language transcribed from the children's oral speech. The Linguistic Structures Repetition Test reflected the same pattern of significant growth between kindergarten and first grade with less growth between first and second grade as reported by O'Donnell, Griffin, and Norris and by Fox. Both of these studies used T-unit length as a measure of syntactic maturity. The test developed for this study is individually administered and takes about ten minutes to complete.

In a companion dissertation, Lyons found significant positive correlations at the .01 level between the Linguistic Structures Repetition Test and the combined first and second grade reading test scores on the California Achievement Tests--Reading (1970 edition, Level 1, Form B - California Test Bureau, Monterey, California: McGraw Hill). Correlations at the .01 level were found on the "Word Recognition" subtest, the "Comprehension" subtest, and for the total test score. For the May delayed post-test with 233 subjects, the correlation coefficients were .44388 on Word Recognition, .37069 with Comprehension, and .44566 with the Total Test scores. The required value at the .01 level with 200 df is .181.

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880'Donnell, Griffin & Norris, Syntax of Children, p. 45.

89Fox, "Syntax in Oral Language," p. 86.

Vocabulary Acquisition

There were also significant increases in vocabulary between grade levels at the .01 level or less, and boys scored significantly higher than girls at the .001 level on the vocabulary test measure. Increases between grade levels reflect the expected developmental trend for vocabulary acquisition. The sex difference in vocabulary acquisition in favor of boys may be a reflection of the findings reported by O'Donnell, Griffin and Norris91 and Fox92 who found the mean length of oral responses and the average word-length of T-units significantly greater for boys. Bougere93 also found that the boys used a greater number of uncommon words from the Thorndike-Lorge list than the girls did.

This finding may also be a factor of the stimulus words presented in the test. Dale94 suggests that boys are more apt to know action and sports words. A preliminary analysis of items 26 through 65 of both forms of the test indicates twenty-three words which were classified as boys' words (e.g., saddle, bronco, arrow, barber), eight girls' words (e.g., queen, pod-pea, counter, tweezers), and forty-nine words classified as neutral (e.g., time, envelope, accident, projector, bannister). See Appendix D for classification list of these words.

94 Edgar Dale, personal conversation, Columbus, Ohio, July, 1972.
Treatment Group Effects

This study revealed no significant differences in acquisition of syntactic structures or vocabulary among the treatment groups. There are several possible explanations for lack of significance, and two of these explanations are explored here: (1) the experimental time period and (2) the instruments used to assess acquisition of syntactic structures and the acquisition of vocabulary.

In the very early stages of language acquisition a great many things happen in a few weeks or a few months. As children mature, however, the acquisition of new structures and of new lexical items appears to slow down. The structures that are acquired during the school years are those which appear rather infrequently in normal speech situations or are those which are exceptions to rather generally applied "rules". In working with five through eight year olds, it is quite possible that the twelve week experimental program was too brief to reflect at a significant level the results of this kind of language development.

The six studies described in Chapter II which used literature as an experimental program to facilitate language development all dealt with low socioeconomic class children many of whom had divergent dialect speech. The present study involved children from lower-middle class or middle class families who spoke a non-divergent dialect. Although comparisons are difficult to make because of this fact and because of the different age groups and different criterion measures employed, a brief consideration of the five studies of English speaking children
may aid in examining the lack of significant difference between the
two treatment groups and the no-treatment control group.

Bailey's study\textsuperscript{95} used children's books and story-telling with
disadvantaged first graders as an experimental program in contrast to a
no-treatment disadvantaged control group and a non-disadvantaged no-
treatment control group. Results were measured on the \textit{Illinois Test of
Psycholinguistic Abilities}. The experimental program took place for an
hour a day for sixty days. The experimental group scored significantly
higher than the two control groups on three subtests and on the total
ITPA, although the non-disadvantaged control group scored higher on one
subtest and there were no significant differences on four of the
subtests.

Two studies involved children under three years of age. Fodor's
study\textsuperscript{96} used children twenty-one to thirty months old and found that
the experimental group who had heard stories read to them every day for
three months exhibited gains in both expressive and receptive vocabulary
that were significant. Cazden\textsuperscript{97} used literature only incidentally and
her subjects were also younger -- twenty-eight to thirty-eight months
old. She, too, found that the children who received the non-expanding
language stimulation which presented adult language structures and
stories gained more on all six measures of acquisition of grammar.

\textsuperscript{95}Bailey, "Use of Library Resource Program."

\textsuperscript{96}Fodor, "Effect of Systematic Reading."

\textsuperscript{97}Cazden, "Environmental Assistance."
Cohen\textsuperscript{98} worked with disadvantaged second graders for an entire school year and measured differences on the Metropolitan Reading Achievement Test and on a Free Association Vocabulary Test. The experimental group showed significant increases in vocabulary and word knowledge and in reading comprehension.

Although Cullinan, Jaggar and Strickland\textsuperscript{99} did not examine developmental changes in language acquisition, they did study the acquisition of standard English with kindergarten through third graders who spoke a non-standard dialect. These researchers used literature in an attempt to increase ability with standard English without changing the children's facility with their non-standard dialect. Statistically significant differences were indicated only at kindergarten level and for the total group on the Education Study Center Bidialectal Proficiency Test.

There are two factors that seem to account for the significant results in these five studies of low socio-economic class children. The effective increases were with the younger children or in studies which had a longer experimental time period.

Although the lack of significance in the treatment-grade level interaction does not permit further tests within particular grade levels,

\textsuperscript{98}Cohen, "Effect of Literature."

\textsuperscript{99}Cullinan, Jaggar and Strickland, "Expanding Language Power."
an examination of the mean scores of the kindergarten groups may be suggestive of differences which relate to the above studies. The control group mean for kindergarten was 13.848; the sharing-discussion group mean was 14.740; and the literature group mean was 17.845. The vocabulary test scores at kindergarten showed the same trend in favor of the literature group with the control group mean of 51.750, the sharing-discussion group mean of 53.473 and the literature group mean of 55.036. This possible trend favoring the literature group is similar to the finding of the five studies dealing with English-speaking children cited earlier in which the significant differences favoring the literature groups were with the younger children or over longer experimental time periods.

Another factor which may have entered into the results of the older children in combination with the time period is that of the level of difficulty or novelty of syntactic structures in the literature program for the first and second grade children. The same thirty-six books were used at all three grade levels to control for this variable. Although the books were originally selected for use with kindergarten through second graders and the children appeared to be interested in hearing them, they may not have been as challenging syntactically for the older children.

Another part of the time variable may involve the socioeconomic class of the children. The studies in which significant language acquisition has been measured after experimental programs of literature and oral language discussion or oral language activities have all involved lower socioeconomic class or disadvantaged children who may be
exposed to a different type of adult language input than that found in books. The middle class children involved in this study may be exposed to a wider range of adult language. An informal survey of the reading habits of the teachers of the classrooms involved in this study indicates that they all read either daily or several times a week to their children. The frequency of the teacher's reading to the children may have diluted the results of the experimental program in literature over the twelve week experimental program.

The instruments used to assess acquisition of syntactic structures and acquisition of vocabulary may not have been accurate enough to pick up differences among the treatment groups at a given grade level. Both instruments used in the present study did reveal differences among grade levels at the .001 level of significance, but the expected differences here are quite great. Differences between treatment groups at a single grade level might be expected to be smaller and require a rather sensitive instrument to reflect possible differences.

The Linguistic Structures Repetition Test devised by the author has not been used or tested with other large groups of children. Although it is based on research indicating structures that may be acquired during this age period, it is possible that other structures might be identified which would strengthen the power of the test.

The Peabody Picture Vocabulary Test, because of its nature, tests a relatively small number of words. Testing started with item number twenty-five and continued until the children had missed six out of eight consecutive responses. This meant that for the most part, the children
were exposed to from thirty to fifty items. Word selection for the
test items may have played a very important part in the results
obtained as well as an insufficient number of stimulus words to elicit
an accurate sampling.

Summary

The major outcome of the study appears to be the test of syntactic
acquisition which was developed to reveal significant differences in
performance of children at three different grade levels. The test did
reflect larger gains between kindergarten and first grade than between
first grade and second grade showing the expected pattern of maturation.
The special value of the Linguistic Structures Repetition Test is that
it can be administered in about ten minutes, requires minimal training
to administer, and is quickly scored. Therefore, it may offer a useful
tool for further research.

Although differences between treatment groups was not significant,
a comparison of the kindergarten means of the three groups indicates a
trend favoring the literature group. This trend coincides with other
research using a literature treatment, with significance shown with the
younger children or over long time periods.

Two possible explanations for the lack of significant differences
between treatment and control groups are explored. First, the
experimental time period may not have been long enough to effect
changes with these middle class children who are frequently exposed to
children's literature outside of the experimental programs. In
conjunction with this time factor, the books selected for the children --
particularly the first and second graders -- may not have been
challenging enough in syntax or vocabulary to effect changes with older
children whose rate of acquisition may be slower.

The second explanation involves the instrumentation used in the
study. The Linguistic Structures Repetition Test is a new test devised
especially for this study and may not be refined enough to pick up
somewhat narrow differences between treatment groups. The vocabulary
test used assesses a relatively small number of items with each child
and so may not be sensitive enough to pick up differences between
treatment groups at the same grade level.

Recommendations for Further Research

To further research in this area, the following studies are recommended:

1. Further experimentation to revise the Linguistic Structures
   Repetition Test in order to develop an instrument capable of measuring
   syntactic acquisition more accurately.

2. A similar study with pre-school and kindergarten children of
   various socioeconomic groups to determine the effectiveness of reading
   literature versus sharing-discussion in the acquisition of syntactic
   structures and vocabulary.

3. Replication of this study over a longer experimental time period
to determine if the changes noted in kindergarten in the acquisition of
syntactic structures with the literature group would be made in first
and second grades at significant levels in all three grade levels and
to determine if there are differences in the acquisition of vocabulary which would be significant.

4. Further study of the vocabulary of young children and the development of alternative ways of testing both diversity of lexical items and depth of meaning of individual items.

5. A series of studies to determine which syntactic structures are acquired during the elementary school years.

6. Further exploration of the gender agreement of pronouns noted in the Linguistic Structures Repetition Test as a problem for the younger or less mature children to determine if this is a structure acquired during this age period.

7. A study to determine if the syntactic structures which are not under the control of individual children also affect their comprehension of reading material containing these same structures.

8. Further examination of sex differences in vocabulary comprehension with stimulus words controlled for possible sex-linked advantages.
LINGUISTIC STRUCTURES REPETITION TEST

Tell the child: "I am going to say some sentences out loud. Listen very carefully to me and then I want you to say just what I did."

Sample Sentences:
a) We're going to buy a new color t.v.
b) He's a good pitcher and plays with us.

If he repeats it perfectly, mark it "c".
If he cannot say it, do not repeat--mark it "x".
If he changes it, mark it "o" and write in the changes made.

1. Her father is principal and he can't come.
2. The hottest day is also the most fun.
3. Get doughnuts and two gallons of chocolate milk.
4. They have got to finish their pictures quickly.
5. Happy except tired, he won the last race.
6. He found the bicycle his brother had lost.
7. The drummer has a drum bigger than himself.
8. Quietly the small boy woke up his brother.
9. Every recess she jumps rope and she swings.
10. Building nests in tall places, birds keep busy.
11. The first to get there wins the race.
12. Somebody passed the ball and he caught it.
13. That band has got to march behind us.
14. The teacher asked us to whisper not talk.
15. She chose the tiny kitten the boy wanted.
16. Santa Claus has some helpers and eight reindeer.
17. He didn't dare walk on the icy sidewalk.
18. My big sister wrote the soldier a letter.
19. That man is captain and he's our neighbor.
20. Racing is more exciting, but swimming is easier.
21. She bought tomatoes and two heads of lettuce.
22. Her mother said she has got to go.
23. Jumping or pushing are both dangerous in school.
24. The coat the man wore was dark blue.
25. I have the book that our teacher read.
26. Slowly and carefully, the truck driver backed up.
27. Saturday he stays home and he watches t.v.
28. Hopping and jumping, the kangaroo ran from us.
29. The last sometimes miss getting as many turns.
30. He runs home and yesterday he ran back.
31. We have got to clean up our desks.
32. He says he's a sadder but better man.
33. The puppy the boy chose had brown spots.
34. The two policemen drove behind the emergency squad.
35. His sister asked if she might go too.
36. My brother gave his friend a birthday present.
APPENDIX B

GENERAL PROCEDURE

One partner should give the Peabody Test while the other gives the sentence test. Since we're using alternate forms of the Peabody, do not do the children in alphabetical or any other special order -- just do them randomly.

LINGUISTIC STRUCTURES REPETITION TEST

1. Explain to the child that you are going to say a sentence and that all he has to do is listen very carefully and then try to say exactly what you say. Use the sample sentences to secure an exact copy. While doing this, you may repeat the sentences for the child and have him try it again.

2. During the test itself, speak distinctly but without any special emphasis. DO NOT REPEAT A SENTENCE. If the child asks you to, just say that that one may be too hard, and that you'll try an easier one.

3. Record as accurately as you can exactly what the child does say. This is crucial.

PEABODY PICTURE VOCABULARY TEST

1. Read the directions below to the child to introduce the test.

"I want to play a picture game with you." (Show example A)

"See all the pictures on this page." (Point to each)

"I will say a word, then I want you to put your finger on the picture of the word I have said. Let's try one. Put your finger on 'bed.'"
After the child points to it, show example B and say,
"That's fine. Now put your finger on 'fish'." "Good."

Show example C.
"Show me 'butterfly'." "Fine."

"Now I am going to show you some other pictures. Each time I
say a word, you find the picture of it. When we get further
in the book you may not be sure you know the word, but I want
you to look carefully at all of the pictures anyway and
choose the one you think is right."

2. Record on the individual answer sheets the number of the child's
response. If he spontaneously changes his choice, record the final
response.

3. Start with plate 25 and work forward until he makes his first error.
   (a) If that is plate 32 or later, go on until he has missed
       six out of eight consecutive presentations. This may be way
       beyond his first error.
   (b) If he has not made it to plate 32 without error, go back to
       plate 24 and work backwards (23, 22, 21) until he has eight
       correct responses in a row and then turn to wherever you left
       off and continue forward until he misses six out of eight.

4. Always secure a response. Say, "Try one. Point to one of them."

5. You may say the stimulus word more than once, but you may not show
   the child the word, or define it, or spell it, or use it in a sentence.
APPENDIX C

McCloskey  Make Way For Ducklings

I. Questions to ask while reading (refer to pages marked with blue tape)
   1. For each of the possible nesting sites ask: What is wrong with this as a place to build a nest and raise ducklings?
   2. What kinds of trouble might Mrs. Mallard have getting her ducklings from the river to the Public Gardens?

II. Questions/Activities after reading
   1. How did Mr. and Mrs. Mallard find a place to build their nest?
   2. What happened after they built their nest?
   3. What problems did Mrs. Mallard have in getting her ducklings to the Public Gardens?
   4. Compare the pictures on pages 24-27 of Ducks, Geese and Swans by Wong with some of McCloskey's illustrations and read them the marked passages on pages 24-25 of Wong. Then ask the following questions: Did the man who wrote Make Way for Ducklings do a good job of telling about the lives of ducks and ducklings? What facts about ducks did you learn from his book? What did he add to the story of all ducks? Which story about ducks did you like better? Why?

III. Vocabulary to be developed
   Clarify the meanings of ducklings, mallard, and molt

Jucker and Ziegler  Squaps the Moonling

I. Questions to ask while reading (refer to pages marked with blue tape)
   1. Is the astronaut right in thinking that there are no living things on the moon? Can you see the moonlings in this picture?
   2. Why do you think Squaps is called the bravest of the moonlings?
   3. How does Squaps look like earth children? How does he look different?
   4. If you met a moonling, what would you want to show him about earth and your life?
   5. Why do you think Squaps liked water so much?
   6. How do you think Squaps felt being the only moonling on earth?

II. Questions/Activities after reading
   1. Could this story really happen? What do you think might happen to a real moonling who came to earth?
   2. Which of the things Squaps discovered on earth made him the happiest?
   3. Why do you think Squaps took water back to the moon with him?
   4. If you were Squaps, would you return to the moon? Why?
III. Vocabulary to be developed
convinced, confused, venturesome, curious, contented, impressed
are all ways people sometimes feel - try to elicit others from the
children.

Freeman  Corduroy

1. Questions to ask while reading (refer to pages marked with blue tape)
   1. Compare Corduroy with the other toys in the first picture. Does
      he look happy? Why do you think he isn't happy?
   2. (p. 8) Do you think the little girl feels as badly as corduroy?
   3. Where do you think Corduroy will look for his button? Do you
      think he will find it?
   4. What do you think Corduroy will do when he hears the watchman
      coming?
   5. What do you think Corduroy will do if the watchman finds him?

II. Questions/Activities after reading
   1. Before he looked for his button, did Corduroy know much about the
      store in which he lived? How do you know?
   2. Where did he look? How did the watchman know something was wrong?
   3. What were the two things which corduroy found that he really
      wanted?

III. Vocabulary to be developed
     escalator - try to elicit the names of other things found in a
     department store
     toppled - try to elicit other words for fall
     corduroy - (swatch to feel) - try to elicit the names of other kinds
     of cloth

Fatio  The Happy Lion

1. Questions to ask while reading (refer to pages marked with blue tape)
   1. (title page) What can you tell about the lion from this picture of
      him sleeping near a bird?
   2. Why do you think the lion was so happy?
   3. After he finds his door open, what do you think the lion will do?
   4. (picture of the lion meditating) How do you think the lion feels
      about the way the people are behaving?
   5. What could the noise be?
   6. What do you think will happen after the fire engine comes?
   7. What do you think is behind the lion?
II. Questions/Activities after reading
1. How did the animals in the park react to the loose lion? Why?
2. How did the lion's friends react to meeting him on the street? Why?
3. How did this make the happy lion feel?
4. How was the lion saved from the firemen?
5. What did the lion decide after he returned home?
6. Would you be afraid if you met a lion on the street?

III. Vocabulary to be developed
polite, foolish, joyous, and sensible are all words to describe how people act - try to elicit others

Freeman  Dandelion

I. Questions to ask while reading (refer to pages marked with blue tape)
1. What did Jennifer Giraffe mean when she wrote in her invitation, "Come as you are"? Do you think Dandelion will come as he is?
2. How has Dandelion's appearance changed?
3. What other animals came to the party? Did they come as they were?
4. How do you think Dandelion felt when Jennifer told about the silly looking lion who had come to her door?

II. Questions/Activities after reading
1. Could this story really happen?
2. Do people ever act the way Dandelion did?
3. Have the children retell the story while looking at the illustrations.

III. Vocabulary to be developed
flushed and foolish describe ways that people sometimes feel - try to elicit others from the children

Lionni  Frederick

I. Questions to ask while reading (refer to pages marked with blue tape)
1. Which one of the mice is Frederick? How do you know? Do you think the other mice will make Frederick work the way they do?
2. How do these pictures show that Frederick is using his supplies?
II. Questions/Activities after reading
1. Before winter came, what did the other mice think of Frederick's work?
2. Why do you think Frederick chose the work he did?
3. What happened when winter first came?
4. What made the other mice ask about Frederick's supplies?
5. What were Frederick's supplies? Did they help the other mice get through the winter?
6. Did the other mice change their minds about Frederick? Do you think he did his share?
7. Do all of you help your families and friends in the same way? Why do you choose to help in different ways?

III. Vocabulary to be developed
reproachfully - try to elicit words for other ways people can talk to or look at others
memory - discuss its relation to words such as remember, memorize

The Biggest Bear

I. Questions during reading
1. (p. 10) What did Johnny's grandfather mean?
2. (p. 14) What do you think he'll see? IF THEY SAY BEAR - Will he shoot it?
3. (p. 22) The story is called The Biggest Bear -- this bear is very small. Why do you think the book is called the biggest bear?
4. (p. 32) SHOW PIC ON p. 23 and p. 33. What's happening to Johnny's bear? What do you think will happen next? Look at the next picture (p. 35).
5. (p. 60) Will this idea work?
6. (p. 64) What was the thing to do? What makes you think so? Will he do it?

II. Questions after reading
1. Were you surprised when you saw him in this picture (43)?
2. How do you know the bear is getting bigger in these four pictures? (34-36-38-40)

III. Vocabulary
humiliated (other ways you can feel)
delighted (other words to show this feeling)
Blueberry Pie Elf

I. Questions during reading
   1. What are some other places he might enjoy?
   2. What do you think he'll do next to get some blueberry pie?
   3. Now do you have any other ideas? If no one could see you or hear
      you or feel you, how could you let them know you were there?

II. Questions after reading
   1. What did he try at first to get the family to make him a blueberry
      pie? (show pic if necessary - beds, dishes, floor)
   2. Why didn't any of those things work?
   3. Can you think of any other ways he could have used?
   4. What is the elf bigger than? What things are bigger than he is?
   5. What problems would an elf have around a regular house? What
      could he use for a blanket, a bathtub, dishes, etc.

III. Vocabulary
    paced (other ways to walk)
    disappointed (other words for this feeling)
    feast (other words for this kind of meal)

The Little House

1. Questions during reading
   1. (p. 4) Could the Little House ever find out? Why do you think so?
   2. (p. 10) What might the Little House see in winter?
   3. (p. 14) Now that there's a road, will this make a difference in
      the Little House's ever seeing the city? Why do you think so?

II. Questions after reading
   1. What were some of the things she didn't like about living in the
      city?

III. Vocabulary
    brook (other words for a brook)
    daisies (other kinds of flowers)
    glance (other ways to look)
Blueberries for Sal

1. Questions during reading
   1. (p. 23) Who does little bear remind you of?
   2. (p. 26) Do you think Sal is right? Why?
   3. (p. 29) Who do you think it will be?
   4. (p. 35) Who do you think little bear will find? Why do you think so?
   5. (p. 51) How do you think the bear will find little bear?

II. Questions after reading
   1. Why was Sal's mother "shy of bears" -- even little bear?
   2. What was the very best, most exciting time in the story?
   3. How does having two stories going on at the same time make it more exciting?

III. Vocabulary
    hustle (other ways of walking)
    tramped
    store up food (ways of doing this)
APPENDIX D

PEABODY PICTURE VOCABULARY TEST

Analysis of items 26-65 of Forms A and B

<table>
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<tr>
<th>Neutral</th>
<th>Neutral</th>
<th>Boys</th>
<th>Girls</th>
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<tbody>
<tr>
<td>teacher</td>
<td>rat</td>
<td>building (v.)</td>
<td>queen</td>
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<tr>
<td>kangaroo</td>
<td>time</td>
<td>arrow</td>
<td>coach</td>
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<td>accident</td>
<td>ambulance</td>
<td>caboose</td>
<td>counter</td>
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<tr>
<td>nest</td>
<td>trunk (foot locker)</td>
<td>goggles</td>
<td>(kitchen)</td>
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<td>wasp</td>
<td>whip</td>
<td>ceremony</td>
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<tr>
<td>picking</td>
<td>temperature</td>
<td>net (fishing)</td>
<td>pod (pea)</td>
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<td>funnel</td>
<td>shining (shoes)</td>
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<tr>
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<td>whale</td>
<td>submarine</td>
<td>tweezer</td>
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<td>cash</td>
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<td>balancing</td>
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<td>cobweb</td>
<td>engineer</td>
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<tr>
<td>dial</td>
<td>pledging</td>
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<td>argument</td>
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<tr>
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<td>hydrant</td>
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<td>signal</td>
<td>hive</td>
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<td>insect</td>
<td>barber</td>
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<tr>
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<td>gnawing</td>
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<tr>
<td>projector</td>
<td>bannister</td>
<td>saddle</td>
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<td>idol</td>
<td>captain</td>
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<tr>
<td>transportation</td>
<td>globe</td>
<td>binocular</td>
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<tr>
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<td>walrus</td>
<td>locomotive</td>
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<tr>
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<td>reel (fishing)</td>
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<tr>
<td>lecturer</td>
<td>horror</td>
<td>weapon (gun)</td>
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BIBLIOGRAPHY

Athey, Irene J. "Language Models and Reading." Reading Research Quarterly, VII (Fall, 1971), 16-110.


Blackman, Mildred B. "Conversation, A Skill to be Learned." Elementary English, XLVIII (November, 1971), 797-799.

Bougere, Marguerite B. "Selected Factors in Oral Language Related to First-Grade Reading Achievement." Reading Research Quarterly, V (Fall, 1969), 31-58.


Dale, Edgar and Schuh, Emily. "A List of 1400 Words Known by 75% or More of First Grade Children in the Enrichment Program of the Columbus (Ohio) Public Schools." Report of the Payne Fund Communication Project, The Ohio State University, Columbus, Ohio, March, 1970. (Mimeographed.)

Davis, E. A. The Development of Linguistic Skill in Twins, Singleton With Siblings, and Only Children From Age Five to Ten Years. Minneapolis, Minnesota: University of Minnesota Press, 1937.


Robertson, Jean E. "Pupil Understanding of Connectives in Reading." *Reading Research Quarterly*, III (Spring, 1968).


Slobin, Dan I. and Welsh, Charles A. "Elicited Imitation as a Research Tool in Developmental Psycholinguistics." Unpublished paper, Department of Psychology, University of California at Berkeley, April, 1967. (ERIC, ED 012 892).


