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THE USE OF STORY READING AS A METHOD OF IMPROVING
VERBAL EXPRESSION OF HEAD START CHILDREN

by

Romayne Norris Sternad

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Family and Child Development

Approved:

Major Professor

Committee Member

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UTAH STATE UNIVERSITY
Logan, Utah

1972

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It was a privilege to work with each of 27 young personalities from Ogden Head Start. These children showed a responsiveness and an eagerness to learn which reaffirmed my belief in the importance of early education.

Romayne Norris Sternad

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ABSTRACT

The Use of Story Reading as a Method of Improving Verbal Expression of Head Start Children

by

Romayne Norris Sternad

Utah State University, 1972

Major Professor: Dr. Don C. Carter
Department: Family and Child Development

The purpose of this experimental study was to conduct and evaluate a teaching method for improving verbal expression performance of Head Start children. The teaching method of language stimulation given the experimental subjects was based on story reading and retelling with active participation by the children in daily small group tutoring sessions, for seven weeks. An academic program given the control subjects included specific vocabulary and sequencing training. Verbal expression was measured by an analysis of stories told by each subject before and after tutoring, in response to sequence pictures and standup figures. Measures of vocabulary, sentence structure and evidence of sequence were used in the analysis. The experimental language tutored group gained significantly from pre- to posttest in 11 of 20 verbal expression criteria. Although a comparison of group means showed the experimental group's performance to have exceeded that of the control group in 15 criteria, only one vocabulary score was significantly greater for the experimental subjects. It was concluded that

verbal expression skills can be accelerated through training. The teaching method based on story reading was recommended for use by Odgen Head Start teachers as one method of improving verbal expression.

(134 pages)

INTRODUCTION

Statement of Thesis Problem

Nature of the problem

The concept of compensatory education in the fifties and sixties grew out of the conviction among educators that there is a lack of essential experiences in the home life of poor children which leads to their inevitable failure in public school. Preschool intervention programs were conceived, now encompassed under Project Head Start, which offered a variety of approaches from total enrichment to specific academic training to remediate these deficiencies and to enable the disadvantaged child to catch up with his advantaged peers. It is believed by some that language deficiency is a major source of the poverty child's failure to learn and achieve in school. Inasmuch as language competency is viewed as a cognitive tool, improved abilities in the use of language should facilitate all avenues of learning. An expressed goal of Project Head Start is to "improve and expand the child's mental processes, to enhance his ability to think, reason, and to speak clearly." Further, the most crucial contributing factor to the learning environment for the Head Start child is verbal communication (Caldwell, 1968).

Recent evaluations of experimental programs have brought deficit theory, methods of remediation and their underlying assumptions into question. Can the problems confronting the child of poverty lie in the educators' inability to perceive the child's culture and his language as being different rather than deficient?

Can a child be helped to learn when the values he brings to the classroom are denigrated? Is the child of poverty "disadvantaged" by virtue of his family and social background or by virtue of his reception, management or neglect in the main culture's proving grounds, the school? While these important theoretical underpinnings remain in controversy, methods of teaching are being tried and analyzed to determine effective ways of helping the disadvantaged child improve his use of standard English.

The present study investigates one method of teaching, the use of story reading, in improving the verbal expression performance of Head Start children. Improvement is determined by comparing a child's verbalization with his own previous performance in response to comparable tasks. The verbal samples thus obtained may be representative of the child's speech specific to the given testing situation. They do not indicate optimum performance. The present experimental study was conducted on a small scale. Its value may lie in contributing another systematic technique in language teaching for the Head Start teacher, rather than in adding weight to any one argument in the discussion of how best to educate the disadvantaged child.

Objectives of the research study

1. To provide an intensive language stimulation program for the experimental subjects in a random sample of Ogden Head Start children, which consists of using:
 - a. Story reading as the language medium,

- b. Active verbal participation by the children,
 - c. Daily tutoring sessions with small groups for seven weeks;
2. To provide a special learning program for the control subjects of the sample, which emphasizes academic skills other than language use;
3. To measure the verbal expression performance of both experimental and control subjects on pre- and posttests as determined by an analysis of:
- a. Individually tape recorded stories told by the child in response to two types of stimuli, sequence pictures and standup figures;
 - b. The following specific components of verbal expression within the stories:
 - 1) Total Vocabulary
 - 2) Vocabulary of Use
 - 3) Verbal Output
 - 4) Mean Length Response
 - 5) Incomplete Sentences
 - 6) Simple Sentences
 - 7) Compound-complex Sentences
 - 8) Action Enumeration
 - 9) Noun Enumeration
 - 10) Sequence Count;
4. To compare the growth in verbal expression demonstrated by the experimental group with that of the control group, by means of statistical analysis.

REVIEW OF LITERATURE

Defining "Disadvantaged"

In discussing education for disadvantaged children it is important to keep in mind the varying interpretations of "disadvantaged" and to make clear what population is being considered. Educators, psychologists and sociologists describe this group in sometimes differing, sometimes overlapping terms. Defining disadvantaged in terms of the social-class characteristics of jobs, education and housing, shows some of the social limitations within which the low income child functions. But gross characteristics of social or ethnic group membership tell us little about the child's learning patterns (Stodoisky and Lesser, 1967). Sigel and Perry (1968, p. 122) express the consensus that the "culturally deprived" children are those from "impoverished families, deficient in linguistic, conceptual, social and motivational requirements" necessary for success in the middle-class oriented school system. This definition encapsules the lists of deficits noted by reviewers of research on the characteristics of the disadvantaged child (Deutsch, 1967b; Havighurst, 1964; Passow, 1970). A causal relationship is assumed in this view of the effects of the poverty cycle: inadequate financial resources in the family lead to a faulty family structure which restricts the child's linguistic and intellectual development, causing poor academic achievement, from which stem underemployment and another generation of low income. Williams (1970) asks whether economic disadvantage inevitably creates cultural

disadvantage. May investigators in fact be talking about a culture put at a disadvantage rather than an inherently disadvantaged culture? Gordon (1965) in a review of descriptive research concerning the socially disadvantaged child points out that these characteristics are invariably stated in terms of their deviance from middle-class white norms. Whereas the behavior and conditions of social disadvantage might give educators information on which to base appropriate learning experiences, the characteristics of social disadvantage instead are presented as negatives to be overcome. Gordon (p. 385) objects further that "there is probably no typical socially disadvantaged child", but a variety of children with varying sets of attributes. Sigel and Perry (1968) caution against labeling the disadvantaged as if they made up a homogeneous group. Their research revealed that variability of performance marks the test behavior of disadvantaged children. The myths and assumptions in vogue concerning the "culture of poverty" are discussed by Herzog (1967). She denounces the "cookie-cutter concept" of culture. In a research study of families from two strata of lower-class East coast urban society, Pavenstedt (1964) vividly portrays the great diversity in life conditions and the degrees of damaging or supporting impact the consequent life styles have on the child. Although stereotyping may be a necessary mental shorthand for organizing the complexities of society, it must be accompanied by a continual awareness of variations and exceptions among individuals. If this is not done, educators pronounce a self-fulfilling prophecy for the disadvantaged child (Rosenthal and Jacobson, 1970).

Operational definitions differ among educators who work with the disadvantaged child. Bereiter and Engelmann (1966) pinpoint language use as the main source of disadvantage relative to education. They interpret cultural deprivation as synonymous with language deprivation. "Language has emerged as a common denominator of the learning deficit. While other handicaps may exist, language is at the core of the difficulty for the disadvantaged child." (Blank, 1970, p. 69). Head Start policy provides an index of poverty with specific income figures for identifying families eligible for the Child Development Program services. Disadvantage is then determined by economic level. The poverty child's need for pre-school training is expressed in terms of deficiencies caused by limited experiences:

...children of the poor often show learning and adjustment difficulties as they approach school age. Because their experiences have been limited, they are often handicapped in their ability to communicate--especially through speech ... (Office of Economic Opportunity, 1967a, p. 2)

A Head Start pamphlet for teachers, "Daily Program I", lists briefly some characteristics of disadvantaged children. Pertaining to language, the list includes: poor language performance, small vocabularies, and lack of labeling behavior. These generalizations are then qualified by a reminder of the many exceptions of poor children who are "the articulate, skillful and competent...the knowledgeable and creative ones" (Office of Economic Opportunity, 1967b, p. 9). Emphasis is placed on developing the maximum potential of the individual child.

Theories of Language Development

Nativist and environmentalist views of language

It is important for the teacher to study the normal developmental pattern of language acquisition in order to teach a child effectively at any given stage. All children learn a language. The nativist's view holds that the capacity to learn language is biologically innate and that there are universal properties in the structure of any form of language (Houston, 1970; Lenneberg, 1970; Menyuk, 1970a, 1970b). According to Menyuk language acquisition is an active process in which the child searches for and extracts rules from the language he hears, stores these structural descriptions in memory, and reconstructs the rules for use in comprehending and in producing language. The child hears an utterance. He interprets what he hears on the basis of the rules he has thus far learned, both to understand the utterance and to revise his hypotheses about these rules. As the child matures, his storage capacity increases and his coding procedures are refined. In speaking, the child produces approximations to model sentences, beginning with one-word sentences, proceeding to the telegraphic speech typical of the preschool child, and finally filling these in to achieve well-formed sentences. It is expected in normal language development that as the child matures, he will produce more phoneme types, he will increase his frequency of word usage, and he will use longer and more complex sentences. Language does not come about by simple imitation. The normal child repeats correctly only that which is formed by rules he has already integrated (Lenneberg, 1970). Language comes about

by the child's abstracting relations from what he hears and synthesizing these into principles for use. Language competence is a universal dynamic process in the child. Competence, however, is not necessarily reflected in performance (Menyuk, 1969). Performance is affected by many factors in the environment.

Cazden (1968a, 1968b, 1970) discusses the environmental process variables that influence language performance: context, stimulation, and response to the child's speech. A child's form of verbalization in a particular context is influenced as much by the characteristics of the situation as by the characteristics of the child. Within a given context a child's speech (and even his decision to speak or not to speak) will vary depending on specific features: the topic and its relevance to him; the task required of him; his audience and the kind of interaction taking place; and the informal-to-formal quality of atmosphere. A child's speech while trading baseball cards with friends on the playground differs radically from his speech in a school interview with a strange adult posing questions. Cazden (1968b) finds that both the amount of well-formed speech the child hears and the variety of richness of linguistic patterns to which he is exposed are crucial in stimulating language development. She reasons that if language learning follows the lines of hypothesis testing, then a varied supply of sentence models would encourage learning, while a meagre supply would inhibit it. The techniques of "expansion" and "expatiation" in adult response to a child's speech were found by Cazden (1968a) to have differential effects on language use. Expansion of a child's utterance merely adds to or corrects the child's grammar. Thus if the response to "Mommy lunch" is "Yes, Mommy is having lunch," the adult is giving

the child no new options for extending his idea or his grammatical expression. In expatiation, a response such as "Yes, let's have lunch now. Then after lunch we can go to the store," elaborates upon the idea originally expressed by the child, while it provides a greater variety of sentence models. In terms of the nativist's theory, the child now has new material to analyze, interpret and utilize in his growing network of grammar. Other investigators find meaningful adult-child interaction highly stimulating to language growth. John and Goldstein (1967) state that the child who actively participates in conversation with a verbally mature individual not only gains greater verbal proficiency but is more likely to use words as mediators of thought.

What is the role of language in cognition? Psychologists define a stage in the development of speech when the normal child achieves verbal control over learning. This process believed essential to the child's intellectual powers is verbal mediation (Jensen, 1963). The child learns to use words in a dialogue with himself which makes possible more rapid learning and greater transfer of what has been learned to new applications. However, merely providing a mediating response for a child confronted with a problem to solve, does not guarantee its use. Age or developmental stage may determine the onset of verbal mediation (Wallace, 1965). When and how verbal mediation normally occurs has not been decided. Whether or not it is prerequisite to logical thinking is disputed (Houston, 1970; Piaget, 1952). Lenneberg's (1970) biological view states that language is a reflection and an intimate part of cognition, neither cause nor effect. Language in this view is not a separate tool but an integrated process of the human brain.

The most widely quoted environmental theorist contrasting the development of language use in British middle-class and lower-class society is Bernstein (1964, 1967, 1970). As a sociologist he interprets language development in terms of modes of control within the family which foster restricted and elaborated codes of spoken language. He stated that the family structure acts selectively on language potential, on the means accessible for organizing meaning (1967). The restricted code is distinguished by rigidity of syntax, limited verbal organization, condensed speech, predictability, dependence upon concrete relationships and shared communal contexts. Bernstein theorizes that the restricted code is the only language available to the British working-class child and that it produces a learning orientation which results in academic failure. The middle-class child has access to more flexible and abstract modes of thinking through the use of both elaborated and restricted codes. Bernstein's later writing (1970) disavows the interpretations which equate restricted code with language deficiency. Here he reiterates the cultural discontinuity between the school and the working-class community based on their different communication systems. Although there may be little parallel between British working class and American poverty life styles, and although one cannot deduce simply from income or occupation level the type of control any family exerts over its children, Bernstein's theoretical construct has been adopted by many authorities to explain the language deficiencies ascribed to the disadvantaged child.

A descriptive language survey study

Language developmental stages may be derived from the data of descriptive survey studies of normal children. The language survey study of Templin (1957) describes certain language skills in children over a range from three to eight years of age. It attempts to provide normative data in four areas: articulation of speech sounds, sound discrimination, vocabulary and sentence structure. Templin's sample was made up of 480 subjects selected by age, sex, intelligence and socio-economic status as classified by father's occupation on the Minnesota Occupational Scale, based on 1940 census data. The children selected were white, monolingual singletons of normal intelligence having no gross hearing loss. Intelligence was measured by the Stanford-Binet test administered to ages five to eight, and by the Ammons Full-Range Picture Vocabulary Test administered to children under five. The Ammons is a test of vocabulary comprehension through identifying elements in pictures. Raw scores are converted to Mental Age equivalents by half years. Part of the Stanford-Binet tests were given by trained examiners, the rest by kindergarten teachers or students in a testing class. The validity of the intelligence testing may be questioned due to test selection and procedure (Anastasi, 1968; Sigel, Anderson and Shapiro, 1966). Sigel et al. suggest that an IQ estimate based on a picture vocabulary test has class bias and may indicate only that verbalization increases in direct relationship to (middle-class) experience in labeling.

Templin's verbal sample for each child was comprised of 50 verbal utterances recorded by hand by an adult observer. These were consecutive remarks unless the speaker's fluency outran the observer's notations, in which case each remark recorded was in its entirety. The verbal sample was used to investigate length of response, total vocabulary, different words, and grammatical sentence categories. Age, sex, intelligence and social class contrasts were made in the findings. Interrelationships between various language skills were reported.

It is doubtful that Templin's language norms can be applied appropriately to disadvantaged populations today, due to the nonrepresentativeness of her sample, the definition of socio-economic status, and the methods of determining intelligence. Templin's view of intelligence vis-à-vis socio-economic status (SES) appears biased in the following statements:

Intelligence was indirectly controlled through the selection of a representative sample according to father's occupation (p. 6). ... That IQ-equivalents based on Ammons' tables are not satisfactory at these early ages is more probable than that the younger children are exceptionally bright, since the children at all ages are selected to meet the same SES criteria. (p. 10)

With the above reservations, some of Templin's findings are pertinent to a discussion of normal language development. The vocabulary of recognition (based on the Ammons' and the Seashore-Eckerson English Recognition Vocabulary Test) shows substantial increase at each successive age, and the vocabulary of use (number of different words) shows a similar but less definite trend. Templin explains that the vocabulary of understanding is larger than the vocabulary of use from infancy on, while both increase into adulthood. There were no sex trends

in length of response or in types of sentences used. With increasing age there is a decrease in incomplete sentences, little change in simple sentences without phrase, and an increase in the use of more complex sentence forms, as in coordination and subordination. Approximately half of the remarks made by three year old children were grammatically correct. The three year olds achieved about half the scores of eight year olds on length of response and number of different words; they reached 40 percent of the eight year old standard in sentence complexity and about 20 percent in subordination. After age three there was little change in the parts of speech used. Templin concludes that by age three, the child's language functions similarly to adult language.

Language Deficiencies versus Language Differences

The necessity for the disadvantaged child to learn standard English is widely recognized. He needs a command of standard English if he is to have access to reading and writing, to formal knowledge in all disciplines, and to employment and social mobility.

The body of literature describing specific deficiencies in the language performance of the disadvantaged child is based upon research into his failure in school (Bereiter and Engelmann, 1966; Deutsch, 1967a, 1967b; Passow, 1970; Powlidge, 1967; Raph, 1965, 1967). Sixty percent of low income children are retarded two years or more in reading by the end of elementary school (Deutsch, 1967a). Deficiencies are outlined by comparison with middle-class language use

which represents the standards of American schools. Reported language deficiencies may be divided into two areas: form and functions. Form includes aspects of vocabulary, syntax, grammar and articulation. Templin's (1957) lower SES groups lagged behind the upper SES groups in all language areas measured, especially in articulation, grammatical complexity, and vocabulary of recognition. A study of story retelling by Milgram, Shore and Malasky (1971) showed the ratio of sheer verbal output in words favoring advantaged over disadvantaged children to be three to two. Functions of verbal expression include verbal mediation of thought, reasoning, generalizing, categorizing, and acquiring information. The latter area of deficits is more serious for the disadvantaged child, if, as Bernstein suggests, restricted use of language produces a restricted ability to learn. It is the demonstrated inability to use language in transmitting ideas "to explain, to describe, to instruct, to inquire, to hypothesize, to analyze, to compare, to deduce, to test..." that impedes academic success for the disadvantaged child (Bereiter and Engelmann, 1966, p. 31). According to Jensen (1963), a child whose environment is verbally impoverished has been given little opportunity to develop verbal mediation and becomes functionally retarded.

From a teaching standpoint, limited vocabulary, simplified syntax, grammatical errors and poor articulation may appear more readily improved than poor reasoning. This would lead a teacher to focus on correcting a child's speech rather than on developing his ideas through speech. Learning language forms, however, is central to the development of language functions. Bereiter and Engelmann (1966)

see the inability to use words flexibly in expressing ideas as a result of the way words are learned by the disadvantaged child. Words are not learned as discrete entities which can be recombined into varying sentences; they are giant conglomerates, imitated from the undifferentiated speech the child hears. Sigel et al. (1966) found that their sample of lower-class preschool children had difficulty objectifying experience. John and Goldstein (1967) concur that the disadvantaged child has difficulty applying labels to action observed or experienced. They postulate that acquisition of labels depends on the stability of the word-referent relationship and on the amount of corrective feedback the child receives. Word-referent consistency would explain why nouns are easier to learn than verbs. Actions vary more in context than a label and its object. If a child does not have the opportunity to hear and use words in varying contexts and is given little feedback modifying his attempts, he will be handicapped in learning words with complex referents. Thus, the authors conclude, active adult-child interaction is a necessary condition for language learning. In their view, low income children have difficulty in labeling because they have little opportunity to engage in active dialogue with adults when learning labels. They learn by receptive exposure rather than through verbal interaction.

Several investigators find adult-child interaction to be a key factor in assuring or inhibiting the child's success in language learning (Bing, 1963; Cazden, 1968a; Irwin, 1960; Olim, 1970). The working-class mothers who used impulsive behavior without reflection or planning, instructed their children ineffectively in Hess and Shipman's (1965) experiment, leading the authors to depict

the meaning of deprivation as a deprivation of meaning in the disadvantaged mother-child relationship. Deutsch (1963) considers the low signal-to-noise ratio in the disadvantaged environment detrimental in that minimal instructional conversation is directed toward the child. In a noise filled home, stimulation is abundant; what is lacking is the selectivity and ordering whereby an adult interprets the meaning of stimuli for the child. The disadvantaged child is conditioned to be inattentive. Havighurst (1964) describes the disadvantaged child's family as one which fails to provide motivation for learning. The family members do not answer the child's questions or encourage him to ask them. They do not give him the need to explain his point of view.

The deficit argument may be summarized as follows. School failure of the disadvantaged child is due to language deficiencies. His use of language is inadequate. His restricted form of language cannot be used as a cognitive tool. The reasons for undeveloped language lie in the home environment. From comparisons of group performance it is inferred that non-standard forms of English are inferior to standard English.

Those who argue for a view of language difference refute deficit theory as being based on: bias against the low income child, a dire educational prognosis with its self-fulfilling prophecy, misinterpretation of the nature of language structure, the stacked deck effect of language measurement, and scant direct evidence concerning factors operative in the home.

There is a fallacy in tracing school failure to inadequacies within the child. When school failure reaches massive proportions the inability of the school to

adjust to its students is brought into focus (Labov, 1970). The child's reputed inadequacy offers an easy excuse for the failure of the school to teach. Class antagonism of the middle-class teacher toward the low income child contributes to their mutual communication barrier. To correct a child's grammar while ignoring the idea he expresses is to disparage not only his language but the child himself. The child whose efforts to speak are often criticized, soon shuts up. One cannot teach any language to someone whose native tongue one scorns (Cohn, 1966; Raspberry, 1970). The significance of the cultural discontinuity between the low income home and the middle-class school is apparent in the mismatch of learning tasks with the disadvantaged child's skills (Deutsch, 1967a).

To the linguist, value judgments upon language are absurd. Any verbal system used by a community which is well-ordered and has a predictable sound pattern, grammatical structure and vocabulary is a language. No language can be inferior to any other (Baratz, 1970a, 1970b). Non-standard forms of English are distinct forms equally valid with standard English in expressing meaning, and in having consistent syntax, rigid rules, and specialized sounds and vocabulary (Baratz, 1970b; Labov, 1970; Raspberry, 1970; Seymour, 1972). The language development of five year old black Head Start children was studied by Baratz and Povich (1967) in terms of their primary language. It was found that the black Head Start child is not delayed in language acquisition as measured by Lee's (1966) developmental-sentence-types model. The Head Start group's sentences were at the kernel and transformational levels, comparable to Menyuk's data with white middle-class children using the same criteria. However, when Osser, Wang and

Zaid (1969) compared black lower-class children's syntactic structures with that of white middle-class children on imitation and speech comprehension tasks, adjusting the data for known dialect differences, the Negro Lower-Class group still made significantly more errors than the White Middle-Class group. The authors attribute the difference to the probability that "Negro children were additionally burdened by the necessity of decoding the relatively unfamiliar dialect" of standard English (p. 1073). A judgment of inferior language status can only be made by comparison with another language system. An interesting perspective is given by Seymour (1972) who has traced the derivation of many of the features of Black English to West African languages:

From this angle [West African point of view], Standard English (1) is lacking in certain language sounds; (2) has a couple of unnecessary language sounds for which others may serve as good substitutes; (3) doubles and draws some of its vowel sounds in sequences that are unusual and difficult to imitate; (4) lacks a method of forming an important tense; (5) requires an unnecessary number of ways to indicate tense, plurality and gender; and (6) doesn't mark negatives sufficiently for the result to be a good strong negative statement.

Now whose language is deficient? (p. 80)

Language deficiencies often have been determined in a research setting of the school or school-like experimental situation (Erickson, 1969). That a child is constrained into defensive, monosyllabic behavior by a threatening situation is no indication of his capacity to use language. The disadvantaged child is far from nonverbal when observed in his own element, "bathed in verbal stimulation from morning to night...sounding, singing, toasts, rifting, louding - a whole range of activities in which the individual gains status through his use of

language" (Labov, 1970, p. 163). The changing levels and amounts of conversation in Labov's interviews with inner city youth contrast strikingly when the power relationship of interviewer-interviewee is altered. The many variables affecting the test situation among other contexts of speech are discussed by Cowan et al. (1967), McDill, McDill and Sprehe (1969), and Stodolsky and Lesser (1967). These variables include: examiner bias, rapport, ethnic identity, primary language, shared context, and culture free test materials. Testing variables may have had an influence on the child's speech performance in Hess and Shipman's (1965) experiment which was conducted in a laboratory setting. Would the interchange between mother and child have been less constrained in the home? Can one project fairly from laboratory evidence to conditions in the home?

It is said the restricted language available to the disadvantaged child limits the expression of ideas. The power of emotive expression, the economy of words and the logic used in non-standard dialects are demonstrated by Cohn (1966), Erickson (1969), Labov (1970), and Riessman (1962). Abstract concepts can be and are discussed in dialect. Data from discussions by inner city and suburban youth show that both groups shift flexibly between restricted and elaborated codes depending upon the context (Erickson, 1969). In a study comparing the linguistic and thematic variables of disadvantaged and advantaged children in a story retelling task, Milgram et al. (1971) found greater consistency among disadvantaged children in retelling essential features of the story with fewer words. Is verbosity in middle-class speech a true measure of maturity of expression?

The restricted form can be precise in a shared context. In order to say the same thing, the elaborated code takes too long to get to the point. If a restricted code is more likely to be used in a shared context, and the home may be considered an intimately shared context, does lack of use of an elaborated code in the home necessarily preclude the development of ideas? Baratz (1970b) finds there has been little demonstration in the literature to show that certain linguistic forms and usages impair cognitive ability. Without direct observation of communicants in the home, the importance of verbal interaction may be speculative.

The proponents of language differences argue that children can learn several dialects and can learn to apply them to appropriate contexts, without the necessity of devaluing their native dialect. It is desirable to make the disadvantaged child bilingual so that he has a negotiable language both at home and in the mainstream society. Non-standard English is a legitimate medium for teaching standard English. Developmental progress needs to be judged in terms of the child's primary language. It is further misleading to equate standard English with an elaborated code. Teachers often teach English as a spoken form of written English. This is a make believe standard. It is rare to find even fluent middle-class speakers who use textbook English. Labov (1970) questions whether it is wise to impose middle-class verbal style upon children from other cultural groups without identifying how much of it is useful for analyzing and generalizing and how much is merely verbose. Middle-class speech can be flexible, detailed and subtle; it also can be "turgid, redundant, bombastic and empty" (Labov, p. 164). Cazden (1968a) reminds preschool teachers that language for learning is

more important for the young child than language for social mobility. The teacher should concentrate on enlarging and refining the child's expression while providing models of standard English, rather than on correcting non-standard.

Language Intervention Programs

Research studies from the late sixties support the idea that a structured, task-oriented language program which provides active participation by the child is effective in teaching the disadvantaged (Edwards and Stern, 1970). Many investigators have found story reading an apt medium for adult-child conversation and language stimulation (Cazden, 1968a; Edwards and Stern, 1970; Irwin, 1960; Jensen, 1969; Karnes, Teska and Hodgins, 1970; Smilansky, 1961; Stern and Keislar, 1969). Small group story reading provides opportunities for elaborating upon vocabulary, for short and long range memory training, for sequencing events to show cause and effect and time relationships, and for making inferences and divergent responses in expressing ideas (Karnes et al., 1970).

The intent and design of the present study are based on recent language intervention programs which apply comparative methods in teaching disadvantaged children. Table 1 contrasts the essential features of these programs.

Cazden's (1965) experiment compared the language stimulation effects of adult responses to children using expansion with that of using expatiation. Twelve black children, age 28 to 38 months, from a Boston day care center were randomly assigned to the two treatment groups and a control. For three months tutors

Table 1. Essential features of four language intervention programs

Program	Treatments	Time, Duration	No. subjects, Tutoring group size	Results
Cazden (1965)	1) expansion 2) expatiation 3) control	40 mins. daily 3 months	12 total 4 per group	2) greater gain than 1) and 3) on sentence imitation test and 5 measures spontaneous speech
Stern and Keislar (1969)	1) echoic prompting 2) parallel prompting 3) listening 4) control	12 mins. 16 days	48 total 3-4 per group	2) greater gain than 1), 3), 4) 3) greater gain than 1), 4) 3) nearly equal to 2) Parallel Sentence Production test, .05 level of significance
Blank and Solomon (1968)	1) tutored group (5 times/week) 2) tutored group (3 times/week) 3) untutored - daily sessions 4) untutored - no sessions	15-20 mins. daily 4 months	22 total 1 per group	mean pre-post IQ gains on Stanford-Binet test, .05 level of significance: 1) 14.5 2) 7.0 3) 2.0 4) 1.3
Edwards and Stern (1970)	1) UCLA Preschool Lang. 2) Readiness Lang. Arts 3) placebo 4) control	15 mins. 4 days 24 weeks	104 total 5 per group	1) and 2) greater gains than 3) and 4) on 6 out of 18 vari- ables, combined tests, .05 level of significance: Preschool Inventory UCLA Language Battery Visual Discrimination Inven- tory

spent daily 40 minute sessions with four children using the sentence expansion treatment in individual conversation. They used non-expanding well-formed sentences (or expatiation) with the second group in one-to-one dialogue during equally timed sessions. The controls received no special treatment. The expatiation group made greater gains on a sentence imitation test and on five measures of spontaneous speech.

Stern and Keislar (1969) compared the effects of a parallel prompting technique with an echoic prompting technique on the child's production of appropriate sentences about pictures. Four groups of 12 black Head Start children from depressed areas in Los Angeles County were randomly assigned to three instructional groups (echoic, parallel, listening) and one control. The instructional groups listened to six tape recorded stories with a sequence of paired black and white line drawings. The echoic prompting group was provided a sentence for each picture and asked to repeat it. The parallel prompting group was provided a sentence for the first picture in a pair, then asked to produce their own sentence for the following picture, using the first sentence as a model. The listeners only heard the taped stories while viewing the pictures. The instruction was given to groups of three or four, 12 minutes each for 16 days. Children given the parallel prompting technique produced better sentences than other groups in a Parallel Sentence Production test. Contrary to expectations, the listening group nearly equalled the parallel group in performance. It was concluded that children lose interest in echoing; they learn to use language better by modeling; and listening is almost as effective as modeling.

Blank and Solomon's (1968) language program tested the thesis that short daily one-to-one tutoring sessions using Socratic dialogue would facilitate abstract thinking in the disadvantaged preschool child. Two tutored groups (varying in number of days tutored per week) were compared with an untutored equal attention group and an untutored regular nursery school group. Twenty-two nursery school subjects from a deprived area in New York City were assigned to groups, matched by IQ, age, and sex. Tutored group 1 received five short individual sessions per week; tutored group 2 received three; untutored group 1 received individual daily play sessions with the same adult. The treatments continued for four months. Techniques in the dialogue sought to develop mental skills of selective attention, categorization, prediction, verbal mediation, cause-effect reasoning, sequential thinking, and an awareness of language. Both tutored groups showed significant IQ gains following training, with the larger gain made by the more frequently tutored group.

A comparison of the effectiveness of two published language intervention programs with a placebo program was made by Edwards and Stern (1970). The UCLA Preschool Language Program (UCLA) required a variety of response modes from the subject in activities covering many content areas. Among these, the language skill area utilized storytelling and retelling in developing verbal expression. The second program, Buchanan Readiness for Language Arts (BRL), introduced basic pre-reading skills and concepts. The placebo program (PI) included games, coloring and story telling. A regular Head Start group served as control (C). Each program was presented in 15 minute sessions, four days for 24 weeks, to

small groups. Children from metropolitan area Head Start classes were randomly assigned by sex to treatment groups. Out of comprehensive testing the two language programs emerged higher than the placebo and control groups on six tests and subtests of the Preschool Inventory, UCLA Language Battery and the Visual Discrimination Inventory. The UCLA group revealed some superiority on broad-based measures. The BRL group showed greater gains in perceptual skills. The authors conclude that even minimal daily intervention which presents a systematic, well-defined curriculum can produce positive results in language abilities.

In each of these studies the effectiveness of specific language instruction through meaningful adult-child interaction was demonstrated. The small group size enabled each child to actively participate in a verbal exchange of ideas. The most successful approach in each of the studies provided a variety of sentence models which the child could choose to adapt to his own use. Successive short periods of intensive language intervention have been shown to effect the development of language performance among disadvantaged children.

Summary of Research

It is widely agreed that disadvantaged children need early education to develop skills that are viable in school and in the larger culture. What and how to teach the poverty child is in full debate. Some authorities project the reasons for school failure to the disadvantaged home and to the limited use of non-standard English in the child's environment. Others defend the child's primary language and culture which they see as different from and discontinuous with middle-class

institutions. The classroom teacher cannot expect to change the total experience of the child. The teacher can develop intervention techniques, particularly in language use, which aid the child in coping with environmental demands and which facilitate learning. Essential components of an effective language program would include: meaningful adult-child conversation, a variety of well-formed model sentences, active verbal expression by the child, and frequent specific language instruction. These goals can be implemented in all content areas of the Head Start program.

The voluminous research from various disciplines concerning the education of the disadvantaged child is beginning to be coordinated into principles and techniques a teacher can use toward improving the child's language performance. Perspectives still differ on the characteristics of the disadvantaged child. Value judgments cloud the interpretation of his language use. The Head Start teacher needs to learn about programs that have been tried in research so that she can use demonstrated techniques to upgrade her teaching skills. She can learn what to expect in normal developmental patterns of language use. It is even more important for the teacher to find, to respect and to use all that the child brings to the classroom in order to mobilize his skills into learning.

METHOD

Theoretical Framework

The use of the term "disadvantaged" in the present study pertains to the children of the poor, as defined by the Head Start index of poverty. The writer endorses the point of view that low income in the family does not and should not automatically prophesy difficulties in language or conceptual learning for the child. The range of abilities and learning potential among Head Start children is expected to be as great as within any other group of preschool children. The need to communicate effectively with others is essential to the success of all children in school and in the larger society. Whether the child is verbally restricted or mature, non-standard speaking, bilingual and/or fluent in standard English, the goal of the Head Start language program is to give him a more effective command of standard English, the lingua franca of the mainstream society. If this goal is not reached, the child will be at a disadvantage in one important mode of learning.

The present study is based on a number of beliefs and research findings concerning disadvantaged preschool children. The first is that time is a crucial factor in every child's intellectual development. The earlier that systematic teaching involves the preschool child in studying his world, the more he will be able to learn. Secondly, poverty puts the child at a disadvantage in our society. The conditions of poverty stigmatize, segregate and restrict the child. Thirdly, the disadvantaged child is not prepared for school tasks. The mismatch between his

language use, skills and learning style and those demanded by the middle-class school create a pattern of school failure which aggravates his handicap. Fourth, the Head Start program is designed to prepare the disadvantaged child for success in school. Fifth, growth in the child's verbal expression abilities can be fostered by direct teaching methods in Head Start. This growth can be measured in its quantitative and qualitative aspects.

There are many techniques, verified by research, which teachers may utilize to improve verbal expression among Head Start children. The use of these techniques represents meaningful interaction between the child and an adult who is important to him. One-to-one dialogue, proposed by Marion Blank and others, ensures the child's focus on and participation in concepts to be learned. Courtney Cazden's method of expatiation expands a child's ideas through conversation. It is important to provide a language model which is precise and unambiguous when helping a child learn to integrate thought and language use. An approach to a teaching language which isolates and refines concepts is stressed by Oralie McAfee, Carl Bereiter and Siegfried Engelmann. Finally, respect and appreciation for the child and his culture are basic to successful teaching.

Hypotheses and Statistical Analysis

This study attempted to answer the following questions:

1. Will the experimental subjects improve significantly in verbal expression performance following the language stimulation program?

2. Will the experimental subjects exhibit significantly greater growth in language use than the control subjects?

For the purpose of analysis of the data, the hypotheses are stated in the following directional form:

1. There will be a significant gain in the mean posttest score over the mean pretest score for experimental subjects on each of ten verbal expression measures.

2. The mean posttest score for experimental subjects will be significantly greater than the mean posttest score for control subjects on each of ten verbal expression measures.

The hypotheses were accepted at the .05 level of significance.

A Sandler's A test, equivalent to the two-sample Student's t-test for correlated samples, was used to evaluate the data pertaining to the first hypothesis. Sandler's A is computed by dividing the sum of differences squared by the sum of differences quantity squared. This measure of statistical inference was appropriate in determining within group differences, i.e. between pre- and posttest scores of the same subjects, on each of ten measures.

Pertaining to the second hypothesis a comparison of posttest means was made. On selected variables an analysis of covariance was applied. In analysis of covariance the magnitude of mean differences between independent samples was determined, i.e. between experimental and control posttest scores on a particular measure, adjusting the mean posttest score by the pretest difference for that measure. This analysis gave covariance F-ratios for interpretation of the

data. The results of the statistical analyses are given in Tables 8 and 9. The comparisons of group means, gains, and standard errors are given in Table 10.

Definition of Terms

Action Enumeration: in the Interpretive Story I, the total number of action verbs or action verb phrases used to describe the sequence pictures on pretest, and on posttest; in the Imaginative Story II, the total number of action verbs or action verb phrases related by the subject on pretest, and on posttest.

Cardboard standup figures: a set of commercial cutout figures (The Judy Company Story Sets, Minneapolis, Minnesota) of adults, children, farm animals and pets, which the subject moved around in play as he told Story II during testing. Figures of a family, farm and pet animals were used to elicit Story II on pretest. Figures of another family, other children, and pets were used to elicit Story II on posttest.

Compound-complex Sentence: one of three grammatical sentence categories to which the subject's responses were assigned. This category includes the McCarthy-Davis classifications: complex, compound, and elaborated sentences (cf. Appendix A).

Disadvantaged: a sociological and educational term applied in this study to children of the poor as defined by Office of Economic Opportunity guidelines (cf. Review of Literature).

Imaginative Story: the sample of spoken language produced by the subject while manipulating cardboard standup figures in an individual test session.

Incomplete Sentence: one of three sentence categories to which the subject's responses were assigned. This category combines the McCarthy-Davis classifications: incomplete, and functionally complete but structurally incomplete (cf. Appendix A).

Interpretive Story: the sample of spoken language produced by the subject upon presentation of a series of sequence pictures in an individual test session. The Interpretive Story is restricted to those responses pertaining to the pictures.

Lower-class: a term variously used in the literature, synonymous with "low income", "low socio-economic status", "disadvantaged" or "not middle- or upper-class". In the research referred to earlier, the term is based on differing characteristics: working-class (British, Bernstein, 1964, 1967, 1970; American, Hess and Shipman, 1965); occupational level (Templin, 1957); ethnic inner city Head Start (Osser et al., 1969); family structure, education, socio-economic level (Sigel et al., 1966); multi-level groupings of family, ethnic, income, education, occupation, housing and mobility factors (Pavenstedt, 1964). Because of its ambiguous reference and derogatory connotation, the term "lower-class" is not used by the writer.

Mean Length Response (MLR): the average number of words in a response. MLR is a ratio of Total Vocabulary over Verbal Output.

Noun Enumeration: in Interpretive Story, the total number of nouns used in interpreting the sequence pictures; in Imaginative Story, the total number of nouns used in the language sample.

Project Head Start: a locally operated preschool program supported by federal funds, serving areas with a high rate of poverty. Children whose families qualify under Office of Economic Opportunity (OEO) poverty guidelines are eligible to attend. The degree of poverty in a community can be measured by the extent of persistent unemployment and underemployment, by the proportion of families on welfare, and by the number of families with low income. A family may be classified as impoverished, generally, if its gross income does not exceed that listed below in size categories. At least 90 percent of enrollment is made up of the poor. A 10 percent allowance is made for over-income families. This ratio may be met by giving primary consideration to children who suffer deprivation or handicap other than economic.

OEO Poverty Guidelines for All States Except
Alaska and Hawaii

Family Size	Nonfarm Family	Farm Family
1	\$ 1,900	\$ 1,600
2	2,500	2,000
3	3,100	2,500
4	3,800	3,200
5	4,400	3,700
6	5,000	4,200
7	5,600	4,700

For families with more than 7 members, add \$600 for each additional member in a nonfarm family and \$500 for each additional member in a farm family. (OEO, 1967a, p. 7)

Response: a term used in descriptive language studies synonymously with "utterance", "expression unit", "verbalization", "remark", or "sentence" in describing a language sample. A response is considered a separate unit if it is marked off from preceding and succeeding remarks by pauses.

Sentence complexity categories: grammatical categories of Incomplete, Simple, and Compound-complex Sentences, adapted from the McCarthy-Davis classifications (cf. Appendix A, Measures).

Sequence Count: the total count of references to sequence in the subject's story, as in denoting cause-effect, beginning-end, serial order, or expressions of time.

Sequence pictures: sets of six 2-3/4 by 4-1/2 inch commercial drawings in color (Sequential Picture Cards II, Developmental Learning Materials, Chicago, Illinois), which tell a story or portray a problem solving situation in sequence. One set depicting a boy sleigh riding was used to elicit Story I on pretest. Another set, comparable in difficulty, which showed a boy riding a bike was used to elicit Story I on posttest.

Simple Sentence: one of three grammatical categories to which the subject's responses were assigned. It includes the McCarthy-Davis classifications: simple sentence with or without phrases, or with compound subject or predicate (cf. Appendix A).

Story reading: a medium of language stimulation. The particular technique of story reading used in tutoring encouraged active participation on the part of the children listening. Time was taken by the researcher to explain and

expound upon elements of the story. Questions were asked of the children to help them interpret illustrations and story content, and to help them anticipate events. Interruptions of the flow of the story were welcome, as children showed interest and involvement by making comments.

Storytelling: a term referring to a tutoring technique and to a task in testing. Storytelling during tutoring sessions was performed by the children individually and cooperatively with the use of book illustrations, flannel board figures, puppets, and dramatization. The storytelling tasks set the individual child in testing were to respond to two types of stimuli: sequence pictures and cardboard standup figures.

Total Vocabulary: the total number of words spoken in the verbal sample, including repetitions.

Verbal expression: performance variables in a sample of the child's speech. In the present study, these variables are defined by ten measures in response to each of two tasks in a testing situation.

Verbal Output: the number of responses comprising the verbal sample.

Vocabulary of Use: the number of different words used in the verbal sample, i.e. the total number of words exclusive of repetitions. No exclusion on the basis of word form or completeness was made.

Procedures

Sample

The Weber County Child Development Foundation was formed in the summer of 1970 to assume the position of delegate agency for the Head Start Program in Ogden, Utah. The Ogden Area Community Action Agency is the federal grantee which provides services and funding for Head Start through Title II-A of the Economic Opportunity Act. Community Action has delegated operation of the Head Start Child Development Center to the Foundation for the 1971-72 school year.

The 1971-72 Head Start Program was funded for recruitment of 210 children of preschool ages. Actual enrollment fluctuated between 190 and 210. The program was conducted in six morning classes and six afternoon classes located in one center. In February, 1972, two morning and two afternoon classes were moved to a second center, in order to provide more room and better facilities for all, as recommended by the Denver Office of Child Development. One of the classrooms moved was participating in the present research study. Children were eligible for Ogden Head Start on the basis of family income or welfare support, according to OEO guidelines. Ten percent of enrollment included over-income families selected on the basis of the child's needs. These children were evenly distributed between morning and afternoon classes. The ethnic-racial breakdown of enrollment was approximately: 17 percent black, 41 percent Chicano, 1 percent Indian and Oriental, and 41 percent white. All pre-kindergarten children in Ogden whose families met the income requirement were served by the program.

The sample for the present study was drawn from the 1971-72 Ogden Head Start population. Two classes were chosen randomly from the six morning classes. All 28 subjects enrolled and believed regularly attending as of January 6, 1972, were assigned randomly to experimental (E) and control (C) groups, so that each class contributed seven experimental and seven control subjects to the sample. A table of random numbers was used for group assignment. A stratified random sample was thus achieved. In that the children were assigned in September to morning and afternoon classes at random, the sample was representative of the Head Start population in Ogden.

The purpose of using two classrooms as combined source for the sample was to minimize the effect of a particular Head Start teacher's teaching style. The teaching styles of the two Head Start teachers were in fact similar in many ways. The teachers were both sensitive to the needs of the individual child. They took time to listen to a child. They noticed and supported the withdrawn child. They provided story reading, filmstrip traditional stories, and opportunities for the children's dramatization of favorite stories, in their regular programs.

Of the original 28 children in the study, 20 made up the final sample from which test data was compiled. One control subject was not present throughout the program. Two experimental subjects moved during the sixth week of tutoring and were not available for posttest. Three experimental and one control subjects were excluded because of low attendance (11 and 13 days' attendance out of 30 possible tutoring sessions). Inasmuch as the study was designed

to test a teaching method, it was deemed necessary to exclude those who attended less than half the tutoring sessions, although the five experimental subjects lost were verbally mature and enthusiastically responsive to the program. Finally, the posttest of one control subject was found invalid due to his unrepresentative lack of response following a week of absence and a death in the family.

Selected characteristics of the sample's group composition are given in Table 2. Further information regarding personal and family characteristics was not available for all subjects. Because of the small number of subjects, groups were combined into total experimental ($N = 9$) and total control ($N = 11$) for analysis of the data.

Research design

The study was devised to test the value of a teaching technique in improving the verbal expression performance of Head Start children. A before-after experimental design was used. Administration and collection of the data covered a period of ten weeks.

Prior to the main study, a pilot project was conducted for the purposes of:

1. Trying out materials and alternative procedures in testing, to find the most productive way of eliciting imaginative and interpretive stories from individual preschool subjects;
2. Developing an effective 20 minute tutoring procedure with small groups of Head Start children, which would not only hold their interest but also invite their participation in storytelling;

Table 2. Characteristics of sample group composition

Sample groups	N	Age range (in months)	Mean age Jan. '72 (in months)	Sex		Ethnic group				Mean no. days of tutoring	Mean % in tutoring attendance	Mean % in Head Start attendance
				F	M	black	Indian	Chicano	white			
E ₁ ^a	6	51-62	56.0	5	1	1	2	0	3	26	87	75
E ₂	3	53-64	58.7	1	2	0	0	0	3	24	84	85
Total E	9	51-64	56.9	6	3	1	2	0	6	25	86	78
C ₁	6	54-63	59.7	1	5	1	1	0	4	22	73	85
C ₂	5	54-63	58.8	2	3	1	2	1	1	24	83	80
Total C	11	54-63	59.3	3	8	2	3	1	5	23	78	83

^aE₁ and C₁ subjects attended Head Start classroom 1; E₂ and C₂ subjects, classroom 2.

3. Running a preliminary analysis of tape recorded stories in order to select and refine criteria that would be descriptive but not time consuming. The pilot study was found to be highly useful in fulfilling these purposes. Children from the Utah State University Child Development Laboratory School and from Ogden Head Start afternoon classes took part in the pilot project over a period of five weeks.

The research schedule for the main study was as follows:

Week 1: the researcher attended adaptation sessions in each classroom, to establish rapport and to familiarize the children with the use of a tape recorder. The adaptation period was intended to minimize the possibility that a pre-posttest difference merely reflected increased familiarity with the examiner and the testing materials. Total time spent working with the children in adaptation sessions was three hours in classroom 1 and two hours in classroom 2.

Weeks 2 and 10: pre- and posttests were given individually in a separate room to all experimental and control subjects in random order. Each subject was asked to tell two stories, which were tape recorded. The first task required the child to arrange in order and describe six sequence pictures. The second task simulated a play situation in which the subject selected six cardboard standup figures and was encouraged to move them around the rug or table, using an 11 by 11 inch homemade cardboard house as he told the story. The first task produced the Interpretive Story I; the second task, the Imaginative Story II. The tape recorded stories were transcribed by the researcher on the same day as recorded. The transcribed protocols were then submitted for independent spot-check rating

by two members of the Department of Family and Child Development, Utah State University.

Weeks 3 through 9: the researcher tutored groups of four or five children for 15 to 20 minutes in a separate room, an average of four days per week for seven weeks. Because of the eclectic nature of Head Start programming, the classes were not available for tutoring the total 35 days anticipated. As a result the researcher worked with tutoring groups on 29 days for one class and on 30 days for the other. The average total attendance in tutoring sessions for groups was even less (cf. Table 2) due to illness or other absence of the children.

The experimental groups were presented a language stimulation program based on story reading and storytelling. The control groups were tutored in academic skills other than expressive language: numbers, directional games, and science. This equal attention design was intended to minimize the Hawthorne effect of increased motivation on the part of experimental subjects due to special attention or change in learning conditions (McDill et al., 1969). The tutoring sessions with the control subjects were planned to focus on activities other than language instruction. However, in the process of teaching concepts specific language was needed by both tutor and subjects to express ideas, to ask questions and to give directions. It would not have been ethical to inhibit this use of language for purposes of experimentation. It does constitute a contaminating factor in the experimental design.

Limitations

The scope of the present study and the interpretation of the data need to be considered in the light of certain limitations:

1. The number of Head Start children in the study was small: 9 experimental subjects and 11 control subjects;

2. The language stimulation program was short-term: over a period of seven weeks, total days tutored ranged from 21 to 29 (a mean of 25) for experimental subjects, and from 19 to 26 (a mean of 23) for control subjects, representing 4-1/2 to 8-1/2 total hours' instruction;

3. An intensive short-term language program's effects upon the development of children concurrently enrolled in a verbal bombardment enrichment program, as that of the Head Start classroom experience, may be narrowly demonstrable;

4. Comparison of a language tutored experimental group with an academic tutored control group in which specific vocabulary was necessarily taught, may not show a measurable difference in language use;

5. There may have been an inappropriate match of materials selected to the level of ability of the individual child, which would reduce the benefits of instruction;

6. The results of the study may reflect the relative effectiveness of the researcher as the only tutor, obscuring the effects of method and materials on the children's language growth;

7. The measurement criteria applied to the performance data may not reflect individual facility in verbal expression.

Tutoring methods and materials

The tutoring program based on story reading with the children's participation was presented 15 to 20 minutes each day. An ideal size for tutoring was found to be three or four children. Larger groups were unwieldy, allowing too little individual participation, too much waiting and too many distractions. The experimental groups ranged in size from one to seven children, with a mode of five. The instructional sequence generally followed was:

1. A book was read to the children with particular attention drawn to the illustrations, and with anticipatory questions about the story. The children were encouraged to react and respond verbally. Interruptions in the flow of the story were welcomed as the children expressed their ideas. The story was then reviewed without benefit of pictures by a series of questions and responses. The tutor encouraged recall of the story's problem, characters, sequence, and dialogue.

2. The book was reviewed by the tutor with the help of children recalling events and interpreting the illustrations. Potentially new vocabulary was explored to test comprehension, define words and clear up any misconceptions. Flannel board figures were manipulated next by the tutor in retelling the story with group participation. In this manner the children could observe the presentation of the flannel pieces while reviewing the essential parts of the story.

3. Individual storytelling of the now familiar story followed two patterns. If the tutoring group size was small (three or four), individual children were invited to tell the whole story with the flannel board. The tutor exchanged places with the child at the table, to become one of the participating audience. Each child experienced the success of telling a story to the others that day. It was one of the children's favored activities. If the group size was large (five or more), individual children were handed a flannel piece representing an event in order of occurrence in the story. While this method assured participation of each child, at times a child's attention was diverted from the storyteller and flannel board to the piece he was holding. Nevertheless the reinforcement of the idea of sequence was believed worthwhile.

4. Dramatization of the story the children had learned was carried out by group role playing. The whole room was used with chairs, table, couch and corners designated the places in the story. Stories with repetitive dialogue were especially well suited to dramatization. Roles were easier to remember, and the plot was tailored to the children's needs by the amount of dialogue.

Hand puppets and homemade stick puppets (construction paper cut-out figures stapled to ice cream sticks) were used in individual or paired imaginative storytelling. It was learned in the pilot project and in the main study that preschool children need frequent experience in using hand puppets before they are able to coordinate manipulation and speech of the puppet. The experience with puppets also reinforced the notion that there is a wide gap in difficulty between the task of retelling a familiar or visually portrayed story and that of making up a new one to

fit a character. The one task requires memory and analysis, the other, imagination. As the children's repertoire of stories grew, they were allowed a choice of activities and roles in story enactment.

Two books were presented each week with their follow-up flannel board stories. The instructional sequence above was followed for the first book and then the second, or the books were presented in parallel fashion. The two stories each week differed in subject and plot from each other, and the children had no difficulty remembering both stories. Two of the 14 books were already familiar to the children and were received enthusiastically. The source of the books was the Weber County Public Library. An annotated bibliography is given in Appendix B. The books were selected for interest, dramatic quality, amount of dialogue, repetition, sequence, and number of events and characters. Some stories needed condensing or paraphrasing so that only essential points to remember were told. The books used represent a small fraction of the many excellent picture stories for preschool children now available.

It was important to match the flannel board figures to the sequence of events told in the story. Presenting identical versions in book and flannel board form reinforced learning. Inconsistencies were quickly noticed and they tended to confuse the child's performance in retelling. An optimum range in number of flannel board pieces was found to be 9 to 13. For ease in manipulating the size of the pieces varied from approximately two inches to eight inches square. A flannel board 20 by 23 inches with light background and supporting stand was used.

When a story is told to children during short periods on successive days in a variety of modes, interest remains high and learning ensues. Given the opportunity to discuss as well as to listen to a story, the children were eager to contribute their knowledge and feelings pertinent to the topic. Often the more vocal child began to monopolize the discussion. While giving recognition and responding to this child, the tutor needed to draw the more reluctant ones into the conversation. This was done with questions made a part of the unfolding of the story. When one child faltered in trying to tell a part of the story, the tutor suggested a model sentence from the story which the child could adapt in his own style. One child often helped another with an idea or expression. Questions were prepared for the story in advance for use during initial reading and review to prompt analytic and divergent thinking.

The tutor applied many of the learning principles and techniques discussed in the Review of Literature. Conversations were based upon the principles of expatiation and one-to-one dialogue. This required that the tutor be an active listener. Verbal praise was given for successive approximations to a goal, and for a completed task. The children were expected to focus their attention on the book's illustrations, on the flannel board, or on the storyteller. The day's activities were explained to the group ahead of time so that they formed a mental set of the tasks. "I am going to read you a new story about an Indian boy. I want you to remember how he finds a horse, so that you can tell me the story later." The children were asked to think through a logical sequence in anticipating future events in the story. The children were made more aware of the uses

of language in passages of humor, fantasy, tension and relief in the stories. The beginning and end were stressed as parts to remember. Words were separated from their referents when meanings were discussed to determine comprehension. The children practiced appropriate use of language in playing roles and in relating experiences. Verbal memory was aided through the recall of events in the story. The children were exposed to a variety of sentence models in the stories. Repetitive sentence models were imitated or translated in the retelling.

The control groups received 15 to 20 minutes of daily instruction in the separate room. Group size ranged from one to eight, with a mode of three children. The format and media for tutoring the control groups differed considerably. The Head Start teachers were consulted as to the needs of particular children in the control groups by way of deciding upon appropriate materials. It was found that the controls from each class could be divided roughly in half between regular learners and children who needed special help. This division was maintained throughout the tutoring, at first by combining the regulars from both classes and the extra-attention children from both. The last three weeks of tutoring it became necessary to work with smaller groups of control subjects (three each). Whereas storytelling kept the attention of the experimentals at least 20 minutes, number and science activities, themselves highly structured, held the controls' interest a maximum of 15 minutes. The novelty of the materials wore off quickly in the control groups. The pace and number of activities was increased. The mean time spent in daily tutoring was close for all groups, however: 18 minutes for experimentals, 15 and 16 minutes for controls.

The academic activities stressed manipulation of materials, using a language for specifics and concept learning. Table 3 presents a list of the varying instructional activities presented the control groups and the learning tasks they entailed. This list indicates the language stimulation which unavoidably occurred. Directions were given; labels were introduced; similarities and differences were pointed out; categories and cause-effect relationships were explained.

Measures

The purpose of assessing performance variables in a child's language is to judge how appropriately he adapts language use to varying situations (Blank and Frank, 1971). For an indication of the range of performance available to a child, it is important to assess language on a variety of tasks in a variety of settings. The testing situation, examiner and materials determine in part the child's performance. His verbal response to demands in testing may or may not be representative of his overall performance. Isolated verbal samples indicate neither optimum performance nor language competence.

The measures chosen to assess language performance in the present study are both quantitative and qualitative. Quantitative measures give the advantage of objectivity in determining growth in language use. Qualitative measures give insight into the strengths and weaknesses of a verbal performance and the consequent value of specific instruction. Measures of Total Vocabulary, Vocabulary of Use, Verbal Output, Mean Length Response, and Noun Enumeration were adapted

Table 3. Instructional activities for controls and the learning tasks they entailed

Activity	Learning Task
Numerals 1-5	Counting, matching
Small blocks; plastic chips	Counting, matching
Hi-ho Cherry-O (game)	Directions, counting, 1-to-1 correspondence
Chutes and Ladders (game)	Directions, counting, numerical sequence
Dominoes	Counting, matching
Cuisenaire rods	Size comparisons, vocabulary
Color-shape perception games	Directions, perceptual identification
Fit-a-Space (rubber cut shapes)	Perceptual identification, matching
Playing cards	Numeral identification, matching
Animal Lotto	Identification, vocabulary
Animal Homes (puzzles)	Labeling, classifying, matching
People and Their Jobs (puzzles)	Labeling, classifying, matching
Carpentry	Directions, vocabulary
Feely box (shoe box with holes at each end, enclosed)	Identifying materials, vocabulary
Wood and paper materials	Identifying, classifying
Experiments with string, paper cones, paper plates, magnets	Identifying properties, concepts, cause-effect, vocabulary

directly from the work of Templin (1957) and McCarthy (1954). These measures of word and sentence count are quantitative. Templin's measures are based on a standard 50 responses for each subject. The present study does not use a set number of responses. Qualitative measures include vocabulary, sentence structure and sequence counts. Measures of Action Enumeration and Noun Enumeration are suggested by items in Deutsch's (1967b) Verbal Identification Test. The sentence complexity categories of Incomplete, Simple and Compound-complex Sentences are made up of combined categories from the McCarthy-Davis grammatical classification used by Templin. The final measure, Sequence Count, is exploratory.

The verbal sample produced in Interpretive Story I was restricted to those responses pertaining to the sequence pictures. The verbal sample of Imaginative Story II included all utterances following the subject's selection of six figures to use in telling his story. The volume of words and sentences differed between stories, therefore, partly due to the definition of the sample, one or two extraneous sentences having been deleted from Story I. Percentages of structures were used for comparing Story I with Story II. Intercorrelations between measures on the same test are given for Story I pretest and Story II pretest in Tables 4 and 5. These intercorrelations were based on combined experimental and control scores in the residual correlation matrix of analysis of variance. These intercorrelations represent one way of assessing internal consistency of the measures.

Table 4. Residual correlation matrix for pretest Story I: intercorrelations of verbal expression measures based on combined experimental and control scores

	TV	VU	VO	MLR	Inc.	Sim.	Com.	Act.	Noun	Seq.
Total Vocabulary (TV)		.94	.79	.29	.42	.69	.79	.76	.72	.67
Vocabulary of Use (VU)			.63	.37	.25	.62	.80	.85	.56	.79
Verbal Output (VO)				-.20	.80	.61	.54	.36	.70	.21
Mean Length Response (MLR)					-.29	-.03	.21	.39	.23	.51
Incomplete Sentences (Inc.)						.05	.23	.00	.57	-.05
Simple Sentences (Sim.)							.43	.52	.38	.26
Compound-complex Sentences (Com.)								.59	.54	.80
Action Enumeration (Act.)									.29	.69
Noun Enumeration (Noun)										.29
Sequence Count (Seq.)										

Table 5. Residual correlation matrix for pretest Story II: intercorrelations of verbal expression based on combined experimental and control scores

	TV	VU	VO	MLR	Inc.	Sim.	Com.	Act.	Noun	Seq.
Total Vocabulary (TV)		.93	.79	.61	.63	.70	.38	.72	.83	.72
Vocabulary of Use (VU)			.67	.71	.45	.66	.49	.83	.66	.73
Verbal Output (VO)				.17	.88	.85	.23	.56	.57	.39
Mean Length Response (MLR)					.10	.14	.30	.59	.52	.54
Incomplete Sentences (Inc.)						.53	-.04	.39	.53	.25
Simple Sentences (Sim.)							.25	.54	.42	.37
Compound-complex Sentences (Com.)								.43	.21	.43
Action Enumeration (Act.)									.48	.51
Noun Enumeration (Noun)										.68
Sequence Count (Seq.)										

Total Vocabulary in both stories correlated understandably high with other quantitative measures (Vocabulary of Use, Verbal Output and Nouns). Total Vocabulary also showed strong correlations with qualitative measures of Simple Sentences (I, .69; II, .70), Action Enumeration (I, .76; II, .72) and Sequence Count (I, .67; II, .70). Vocabulary of Use followed a pattern similar to Total Vocabulary. Simple Sentences showed correlations from .62 to .70 with Vocabulary of Use and Total Vocabulary in both stories. Compound-complex Sentences, however, correlated at .79 and .80 with Total Vocabulary and Vocabulary of Use and at .80 with Sequence Count only on Story I. When percentages are viewed, Story I showed 5.7 percent Compound-complex Sentences and Story II showed 6.4 percent Compound-complex Sentences in Verbal Output.

Mean Length Response showed low and some negative correlations with sentence complexity categories. This observation contrasts with the correlations found by Templin and by Williams (1937) between their MLR and sentence complexity scores (SCS). Templin used Williams' system of weighting sentence categories, 0 to 4. One explanation of the gross between study difference lies in the fact that sentence types were tabulated, not weighted with values, in the present study. The comparison supports Cowan's et al. (1967) objection that reported MLR figures reflect methodological differences as well as the speech tasks and age levels. A comparison of intercorrelations between verbal expression measures in the four studies is given in Table 6.

Table 6. Comparison of intercorrelations between verbal expression measures reported in four studies

Investigator	Measures correlated	N	Age (in years)	No. responses	Task	r
Williams	MLR vs. SCS	38	3 to 4	40	play	.80
Templin	MLR vs. SCS	60	4.0 4.5 5.0	50	play with toys	.88 .90 .59
Sternad	MLR vs. Incomplete	20	4.8	8	interpreting pictures	-.29
				20	imaginative play	.10
	vs. Simple			8	interpreting pictures	-.03
				20	imaginative play	.14
	vs. Compound-complex			8	interpreting pictures	.21
				20	imaginative play	.30
Cowan	MLR vs. % Incomplete vs. % Complex	6	5.0	50	interpreting 10 colored pics.	-.11 .79
Templin	MLR vs. VU	60	4.0 4.5 5.0	50	play with toys	.93 .89 .91
Sternad	MLR vs. SCS	20	4.8	8	interpreting pictures	.37
				20	imaginative play	.71

Table 6. (Continued)

Investigator	Measures correlated	Age		No. responses	Task	r
		N	(in years)			
Templin	VU vs. SCS	60	4.0	50	play with toys	.69
			4.5			.76
			5.0			.80
Sternad	VU vs. Incomplete	20	4.8	8	interpreting pictures	.25
				20	imaginative play	.45
	vs. Simple			8	interpreting pictures	.62
				20	imaginative play	.66
	vs. Compound-complex			8	interpreting pictures	.80
				20	imaginative play	.49

The individual measures are described below:

1. Total Vocabulary: the total number of words counted in a verbal sample, including repetitions. Growth in Total Vocabulary from pre- to posttest indicates increased fluency.

2. Vocabulary of Use: the number of different words spoken, exclusive of repetitions. Templin (1957) found Vocabulary of Use to be roughly half of Total Vocabulary. Vocabulary of Use increases with age. An increase in different words used from pre- to posttest was considered a more relevant indicator of language growth than an increase in verbage.

3. Verbal Output: number of responses in a verbal sample. Increased Verbal Output from pre- to posttest may indicate an increased fluency or an increase in rapid, telegraphic speech. This measure is qualified by the mean number of Incomplete Sentences for the same group.

4. Mean Length Response: average number of words per utterance. The measure is derived from dividing Total Vocabulary by Verbal Output for a particular sample. McCarthy (1954) found MLR based on 50 responses to be most reliable, objective, quantitative, and easily understood among measures of linguistic maturity. Cowan et al. (1967) debate this assertion in their study of variables affecting MLR. These investigators point out that the between study disparity in size of MLR for children of the same ages indicates its low reliability. They found that stimulus and examiner variables influenced the size of MLR. They agreed with Templin (1957) and with Menyuk (1970a) that MLR increases developmentally with age.

5., 6. and 7 Sentence complexity categories: grammatical types of sentences to which responses in the verbal samples were assigned. The three gross categories used in the present study combine and simplify the McCarthy-Davis classification which gives two major divisions and 20 subdivisions of categories. The McCarthy-Davis schema has not been adapted in toto for two reasons. Some of the categories as outlined overlap; some are ambiguously stated. Secondly, there is an incongruity in measuring spoken language by grammatical rules derived from written standards. Dialect and bilingual expressions are especially penalized when measured by rules of written English grammar. Templin (p. 84) reduces the McCarthy-Davis classification to six categories, in a comparison of mean percentages of total remarks in each sentence category found in three studies. When these are further reduced to three, the divisions are more clear cut. For instance, an incomplete statement according to the McCarthy-Davis outline may apply to "functionally complete but structurally incomplete" by interpretation of its intent. The same statement may apply to "incomplete" by a description of omitted parts of speech. Therefore, the category Incomplete Sentence (5.) was preferred in analysis of the present data. Subdivisions of simple sentences were believed similarly unnecessary. A simple sentence with or without phrase contains basically a subject and a predicate. A simple sentence does not contain a clause, which distinguishes it from a complex sentence. A simple sentence joined with another simple sentence becomes a compound sentence. Therefore the present category Simple Sentence (6.) was used. Again, the McCarthy-Davis descriptions of "elaborated sentence" overlap with those of "complex" and "compound"

sentences. These were then grouped together under Compound-complex Sentence (7.) as the most mature sentence type of the three. Complexity of grammatical construction was found to increase with age by Templin and others. The writer interprets Templin's analysis of sentence complexity as discriminatory against non-standard patterns of English, because of her device giving weighted values to sentence types.

8. Action Enumeration: the number of verbs or verb phrases denoting movement or change in status or behavior, in the verbal sample. Action verb count is an indicator of content complexity in a child's story. It reveals the level of interpretation of meaning in the sequence pictures.

9. Noun Enumeration: the number of object labels noted in the sequence pictures in Story I, the total number of nouns used in Story II. McCarthy's research showed that after three years of age the percentage of nouns to Total Vocabulary stabilized at 20 percent. Templin's age groups, three to eight years, used approximately 17 percent nouns. Noun Enumeration indicates the discrimination and utilization of stimuli in a story. However, naming without stating relationships is indicative of less mature language use.

10. Sequence Count: number of references to sequence as in expressions of cause-effect, beginning-end, serial order, and time relationships. Repetitions within the same sentence were not counted. Examples of references are:

- a. Cause-effect: probably, why, how come, if...then, because, so;
- b. Beginning-end: started to, getting ready to, that's all, that's the end, I'm done, I'm finished, I'm through;

- c. Serial order: first, next, still, again, already, then, so, after, in front of, behind;
- d. Time relationships: wait a minute, now, once upon a time, next week, then, yesterday, today, tomorrow.

Sequence count may indicate the level of organization in a child's story. It was speculated that an increase in Sequence Count showed growth in language use.

For analysis of the data, mean group scores of the ten measures were used on pre- and posttest, in Story I and in Story II.

Testing

The verbal samples which provided the data for analysis were derived from two tasks in individual testing before and after the treatment program. The testing was conducted during weeks 2 and 10 of the program. The setting for testing was a separate office-like room with table and chairs, rug, and a tape recorder. The same room used for testing was used for tutoring the subjects during the treatment period. Testing of all 27 pretest subjects and 25 posttest subjects was administered by the researcher in random order. Most of the children had had an opportunity to use the tape recorder during the adaptation sessions in their classrooms. During adaptation, a total of three hours in one classroom and two hours in the other, the children became familiar with the examiner in the role of teacher aide. The examiner's characteristics of being a white middle-class teacher, age 38, may have influenced the testing situation.

The two tasks presented in testing were designed to elicit samples of interpretive and imaginative language. The tasks contrasted on several dimensions: describing vs. relating; structure vs. spontaneity; restricted vs. free movement; school-type task vs. simulated play. A task of describing pictures was assumed easier than a task of making up a story to fit a character, therefore the Interpretive Story task was presented before the Imaginative Story task. The stimuli for Interpretive Story I were six 2-3/4 by 4-1/2 inch colored commercial drawings: Sequential Picture Cards II (Developmental Learning Materials, Chicago, Illinois). The task required the subject to arrange the pictures on the line and then tell what happened in each picture. Imaginative Story II stimuli were six cardboard figures chosen by the subject from 25, which he moved around the rug (pretest) or table (posttest) while telling the story. The figures of people, farm animals and pets were from Story Sets (The Judy Company, Minneapolis, Minnesota). They were three to six inches tall. An 11 by 11 inch painted cardboard box served as playhouse for the figures with a cut-out door and a fitted rug. Use of the house was optional. The sequence pictures on pretest depicted a boy sleigh riding; on posttest, a boy riding a bike. The standup figures on pretest included a three-generation family, farm animals and pets; on posttest another three-generation family, more children and pets. Photographs of the test materials are given in Appendix C.

The testing procedure was standardized in order and amount of the examiner's verbalization, and may be outlined as follows:

Pretest Story I

1. Instructions,
2. Examiner's demonstration,
3. Instructions repeated,
4. Subject's task
 - a. Arrange pictures,
 - b. Describe.

Pretest Story II

1. Instructions,
2. Subject's first trial,
3. Instructions repeated,
4. Subject's task
 - a. Choose figures,
 - b. Tell story.

Posttest Story I

1. Recalling pretesting procedure,
2. Instructions,
3. Subject's task
 - a. Arrange pictures,
 - b. Describe.

Posttest Story II

1. Recall pretesting procedure,
2. Instructions,
3. Subject's task
 - a. Choose figures,
 - b. Tell story.

The examiner demonstrated pretest task I using a set of three sequence pictures of a duck and a pond, arranging them in order and telling a brief story about them. On pretest task II it was realized that a demonstration by the examiner might influence the subject's story plot. A trial run was allowed each child before the test sample was recorded. Story I verbal sample was restricted during data analysis to those responses which pertained to the pictures. Extraneous material was deleted. Story II verbal sample was open-ended, having begun after the child isolated six figures to use. The conclusion of Story II was signalled by the subject. If this was not clear by his statement or behavior, the examiner asked, "Is that all of your story or would you like to tell some more?" It was frequently necessary to repeat brief encouragement and directions after the child accomplished the

first part of each task (a. above) to help him get started, by saying, "Good, Johnny, now tell me a story about them" or "Look at each picture now and tell me what happened." Expressions used in encouragement were taken from the original instructions; care was taken not to add a new element to the task. The testing procedures were applied consistently to all subjects, as much as possible.

A number of unexpected variables worth noting grew out of the children's myriad reactions to the testing. The wide variability of performance was noted between subjects and between testings for the same subject, in behavior. Some children appeared quiet and subdued in the separate room, in contrast to their classroom behavior. These children usually had trouble getting started on a task and handled the materials cautiously. Some were aware of the presence of the microphone and recorder. One felt threatened: "Don't tell me with this!" Other children became involved in the tasks immediately and enthusiastically and seemed to ignore the examiner and tape recorder. A few children applied the procedure from Story I to Story II, i.e. after arranging pictures in a row, they later lined up the figures in a row and described them one by one. This was interpreted as adaptive behavior, applying previous success to a new, unfamiliar task. Several children had difficulty limiting their choice to six figures as instructed, although assistance was given in counting figures chosen and in returning the remainder to the box. A high level of activity in playing with the standup figures was accompanied by run-on sentences or staccato phrases. During the storytelling, especially on posttest, the disadvantage of tutor acting as examiner became apparent. Many children tried to engage the examiner in conversation and were distressed

by the examiner's withdrawal. One indication of the effect of the testing situation on the child's amount and quality of verbalization was particularly obvious. After Story II was completed, the examiner made notes while the subject was allowed to continue playing with the standup figures. Repeatedly, the child's manner relaxed and his talking became more natural and fluent in play. Sigel and Perry (1968) made similar observations on verbal behavior outside the test context. The variability of behavior lends support to Cowan's et al. (1967) reminder that stimulus and examiner effects profoundly influence the child's verbal performance in a testing situation.

The tape recorded stories were transcribed by the researcher the same day of testing to assure greater accuracy in transcription. The protocols were later edited for accuracy after a second hearing. Nevertheless, transcribing entails subjective error. Length of response was determined by breathing space (cf. Appendix A), which was often difficult to judge. Certain expressions in dialect or bilingual intonation may not have been transcribed accurately (as "he's" or "his"). The tapes were generally clear, although the softness of some voices and occasional background noises distorted a few responses.

The researcher rated the pre- and posttest protocols. In scoring, rules followed for word count, sentence count and classification were adapted from Templin's procedure. Additional rules were specified by the researcher. These rules are given in Appendix A. Rater reliability was assessed by submitting the pretest protocols to two independent raters from the Department of Family and Child Development, Utah State University, for spot-checking. Table 7 indicates

the rater reliability as expressed by percentage of agreement between three raters on selected pretest stories and variables. Percentage of agreement was determined by total count of three raters on a measure divided by total count plus difference count.

Table 7. Percentage of agreement among three raters on 12 variables in five subjects' pretest stories

Variables	Story I	Story II
	(%)	(%)
Total Vocabulary	100	100
Vocabulary of Use	98	99
Verbal Output	100	100
Action Enumeration	94	100
Noun Enumeration	98	100
Sequence Count	100	100

Complete agreement was found by two raters on the three sentence complexity categories for one subject's pretest, although further subdivisions revealed a difference of one sentence within Incompletes and one within Simple Sentences. MLR, a ratio of Total Vocabulary to Verbal Output, was not included.

No measure of test-retest reliability was computed in the study. Given the diversity of verbal expression which reflected the many process variables

operative in each testing situation, it is doubtful that test-retest reliability would be high. A determination of internal consistency for the measures was provided by the residual correlation matrices for pretest Story I and pretest Story II, based on combined experimental and control scores (Tables 4 and 5).

FINDINGS

The major findings of this study were:

1. The experimental group showed significant verbal expression growth from pre- to posttest in three quantitative measures on an interpretive storytelling task, and in four quantitative and four qualitative measures on an imaginative storytelling task. The gains in experimental group mean scores on Story I and Story II represent growth in the direction of greater maturity of expression within the developmental scheme of language acquisition described by Lenneberg (1970), Menyuk (1970b), McCarthy (1954) and Templin (1957).

2. By a comparison of group means, the experimentals outperformed the controls in pre-post gains in seven out of ten measures for the Interpretive Story I, and in eight out of ten measures for the Imaginative Story II. One measure, Total Vocabulary in Story II, was statistically greater on posttest for experimentals than for controls.

Hypothesis 1

It was hypothesized that the experimental group posttest mean score would exceed the pretest mean score significantly at a probability level of .05, on each of ten verbal expression measures for each story. The hypothesis received partial support, in the results of 11 out of 20 variables in all.

Statistical analysis

The Sandler's A test for correlated samples was used to compare within group pre-post gains, based on raw score differences: sum of differences squared divided by sum of differences quantity squared. The Sandler's A is equivalent to the Student's t-test for correlated samples. Because of the directionally stated hypothesis, a one-tailed area of values was used.

Significant gains were found for experimental subjects on 11 variables:

Story I	Vocabulary of Use	(.01)
	Action Enumeration	(.05)
	Noun Enumeration	(.05)
Story II	Total Vocabulary	(.005)
	Vocabulary of Use	(.0005)
	Verbal Output	(.0005)
	Incomplete Sentence	(.01)
	Simple Sentences	(.0005)
	Action Enumeration	(.01)
	Noun Enumeration	(.0005)
	Sequence Count	(.05)

Table 8 shows within group mean pre- and posttest scores for all measures, pre to post gains, and Sandler's A values based on raw score differences.

Within the control group significant pre-post gains were found on five measures:

Story II	Total Vocabulary	(.05)
	Mean Length Response	(.025)
	Action Enumeration	(.05)
	Noun Enumeration	(.01)
	Sequence Count	(.05)

Table 8. Pre-post within group gains on ten measures in Story I and Story II: means and Sandler's A values (based on raw score differences)

Measure	Experimental				Control			
	Story I		Story II		Story I		Story II	
	\bar{X}	A	\bar{X}	A	\bar{X}	A	\bar{X}	A
Total Vocabulary								
pre	44.77		76.00		57.90		133.90	
post	73.11		208.66		63.63		185.90	
gain	28.34	0.503	132.66	0.148 ⁺	5.73	4.364	52.00	0.357*
Vocabulary of Use								
pre	21.77		33.00		28.63		55.63	
post	33.33		76.22		29.81		71.54	
gain	11.56	0.205 ^{***}	43.22	0.131 ⁰	1.18	9.810	15.91	0.386
Verbal Output								
pre	6.33		12.00		9.09		26.36	
post	10.11	0.382	34.55	0.143 ⁰	10.36	5.397	32.72	0.690
gain	3.78		22.55		1.27		6.36	
Mean Length Response								
pre	7.00		5.44		6.81		5.00	
post	7.55		6.00		6.45		6.36	
gain	.55	4.867	.56	5.898	.36	3.718	1.36	0.222 ^{**}
Incomplete Sentences								
pre	2.88		7.55		5.63		15.36	
post	5.22		17.11		4.27		18.72	
gain	2.34	0.877	9.56	0.197 ^{***}	-1.36	1.386	3.36	0.729
Simple Sentences								
pre	3.11		3.33		2.90		9.63	
post	4.00		14.55		5.27		11.54	
gain	.89	1.375	11.22	0.142 ⁰	2.37	0.502	1.91	1.666
Compound-complex Sentences								
pre	.33		1.11		.54		1.36	
post	.88		2.88		.81		2.45	
gain	.55	0.440	1.77	0.449	.27	1.444	1.09	0.611

Table 8. Continued

Measure	Experimental				Control			
	Story I		Story II		Story I		Story II	
	\bar{X}	A	\bar{X}	A	\bar{X}	A	\bar{X}	A
Action Enumeration								
pre	5.88		7.44		8.18		11.27	
post	8.55		19.33		8.54		16.54	
gain	2.67	0.340*	11.89	0.217***	.36	10.00	5.27	0.314*
Noun Enumeration								
pre	5.77		12.66		8.18		17.09	
post	9.11		27.44		9.81		25.90	
gain	3.34	0.293*	14.78	0.130 ^o	1.63	0.827	8.81	0.206***
Sequence Count								
pre	3.11		3.22		3.54		5.18	
post	1.88		9.77		3.63		6.72	
gain	-1.23	1.314	6.55	0.265***	.09	257.00	1.54	0.306

p	df	tailed	A
.05*	8	1	0.368
.025**	8	1	0.278
.01***	8	1	0.271
.005 ⁺	8	1	0.190
.0005 ^o	8	1	0.146
.05*	10	1	0.368
.025**	10	1	0.274
.01***	10	1	0.210
.005 ⁺	10	1	0.181
.0005 ^o	10	1	0.134

A is significant at a given level if it is equal to or less than the given p value for n-1.

Descriptive analysis

Figure 1 illustrates the gain in pre-post mean scores for experimental subjects on Total Vocabulary, Vocabulary of Use and Verbal Output in Story I and Story II. The task of Story II produced a more spontaneous approach to the stimuli presented. Whereas Story I ended when the subject had described the series of six pictures, Story II ended when the subject was finished playing with and talking about six cardboard figures. This difference was reflected especially in the amount of gain in Total Vocabulary in Story II. Vocabulary of Use was less than half the Total Vocabulary for each story and each group. Templin found the number of different words to be slightly more than half the total number of words in her samples. Although MLR remained relatively unchanged from pre- to posttest, the experimental group made significant gains on 8 out of 12 vocabulary measures. These gains indicate substantial growth in the use of words by the experimental subjects in training.

Qualitative differences in the language used by experimental subjects are shown in the percentage of pre- and posttest sentence complexity categories in Figure 2. Here the gain in percentage of Incomplete Sentences and the loss in percentage of Simple Sentences in Verbal Output for Story I indicate a regression to less mature verbal expression, qualified by some growth in percentage of Compound-complex Sentences. Story II shows stable growth, in that Incompletes decrease and Simples increase, with little change in Compound-complex Sentences. Qualitative growth over treatment is also shown in the use of action verbs, nouns and sequence references in the stories. Figure 3 illustrates the direction of the change in scores

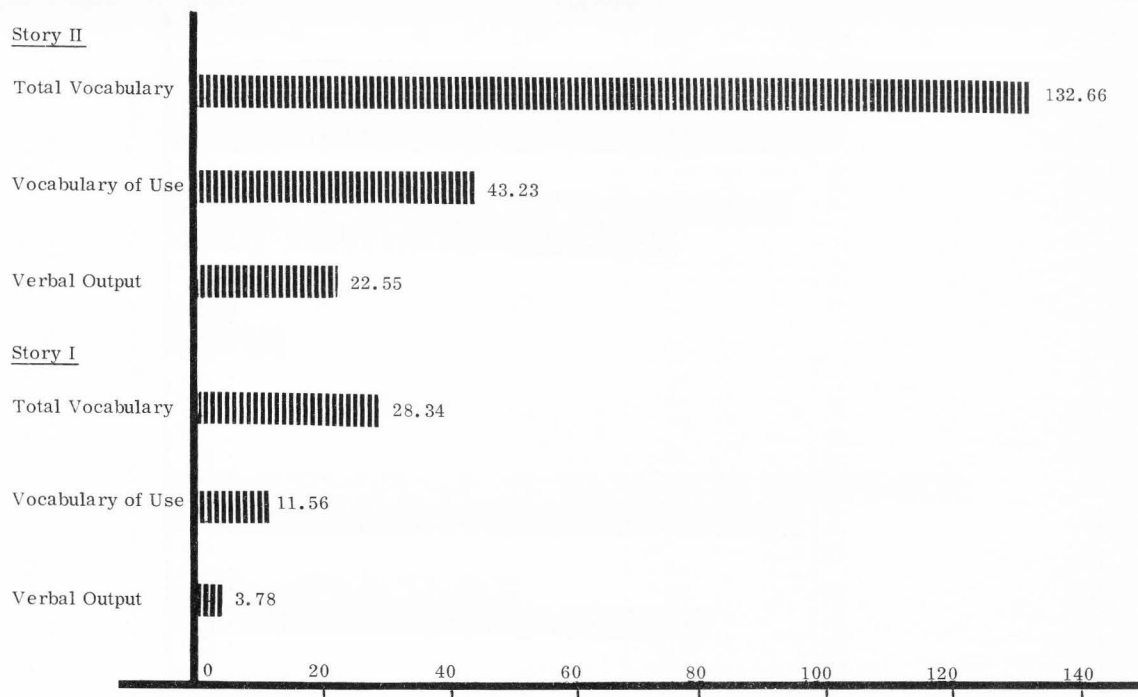


Figure 1. Gains in pre-post means for experimental subjects on Total Vocabulary, Vocabulary of Use and Verbal Output measures in Story I and Story II

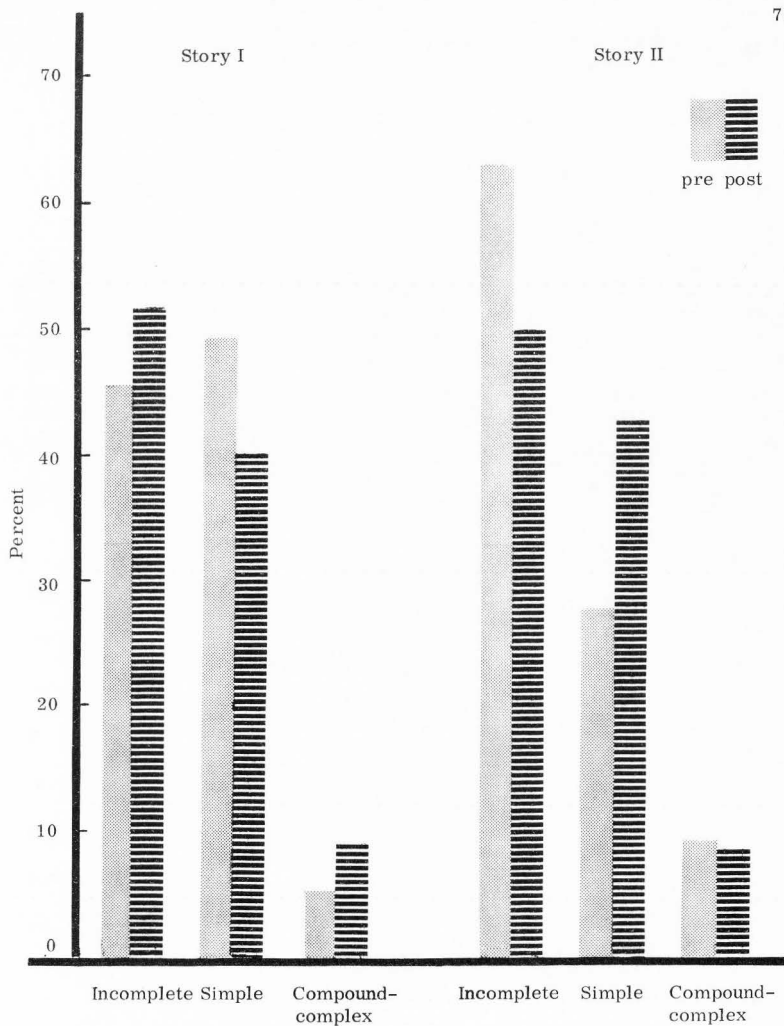


Figure 2. Percentage of pre- and posttest responses in sentence complexity categories, by experimental subjects in Story I and Story II

for experimental and control groups. Pre to post gains in vocabulary and sentence complexity measures for controls are given in Appendix D.

Hypothesis 2

It was postulated that the mean pre-post difference for experimental subjects would be significantly greater than the mean pre-post difference for control subjects on each of ten verbal expression measures for each story. This hypothesis was not supported, with the exception of the measure of Total Vocabulary in Story II.

Statistical analysis

An analysis of covariance was used on selected variables to compute the difference in mean posttest scores for experimental and control groups. In the analysis of covariance the posttest score for each measure is adjusted by the difference in the pretest group scores for that measure. This test of statistical inference is particularly useful in interpreting data from small samples in which the variability of individual scores is likely to be great. Covariance analysis adjusts mean posttest scores to compensate for differences between groups in initial testing. Table 9 gives analysis of covariance data, adjusted means and F-ratios for selected variables in Story I and Story II.

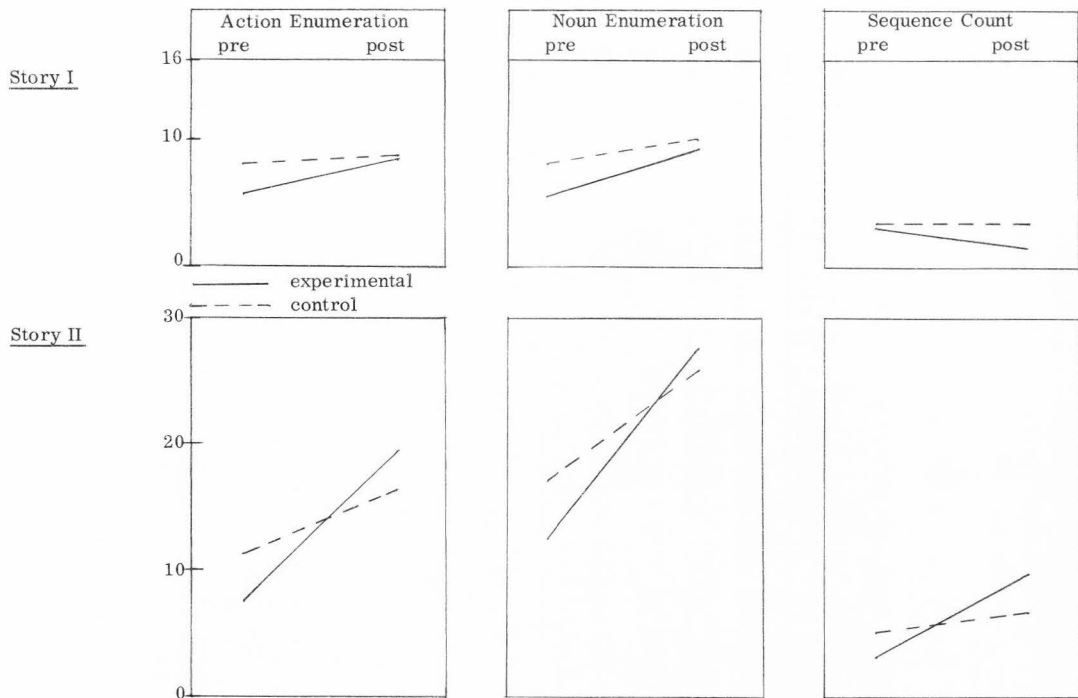


Figure 3. Comparison of pre- and posttest mean scores on Action Enumeration, Noun Enumeration and Sequence Count for experimental and control subjects in Story I and Story II

Table 9. Analysis of covariance, adjusted means and F-ratios for selected variables in Story I and Story II

Measure	df	Adjusted means		F-ratio ^a	p
		E	C		
Total Vocabulary					
I	1, 17	74.44	62.54	0.450	
II	1, 17	251.20	151.10	5.197	.05
Vocabulary of Use					
I	1, 17	33.88	29.37	1.360	
II	1, 17	87.74	62.11	3.593	
Verbal Output					
II	1, 17	42.14	26.51	3.302	
Incomplete Sentences					
II	1, 17	20.74	15.75	1.053	
Simple Sentences					
II	1, 17	16.57	9.89	2.897	

^aAn F 1, 17 of 4.45 is required at the .05 level of significance.

Descriptive analysis

For the purpose of closer inspection of experimental and control differences, Table 10 gives a comparison of pre-post gains in mean scores with standard errors. The quantitative vocabulary measures show consistently greater gains by experimentals than by controls (with the exception of MLR in Story II), the experimental

Table 10. Comparison of experimental and control group pre-post gains on ten measures in Story I and Story II: means and standard errors

Measure	Story I				Story II			
	Experimental		Control		Experimental		Control	
	\bar{X}	SE	\bar{X}	SE	\bar{X}	SE	\bar{X}	SE
Total Vocabulary								
pre	44.77	10.57	57.90	9.56	76.00	21.30	133.90	19.27
post	73.11	12.65	63.63	11.44	208.66	40.32	185.90	36.47
gain	28.34		5.73		132.66		52.00	
Vocabulary of Use								
pre	21.77	4.05	28.63	3.66	33.00	7.52	55.63	6.80
post	33.33	2.73	29.81	2.47	76.22	11.08	71.54	10.02
gain	11.56		1.18		43.22		15.91	
Verbal Output								
pre	6.33	1.57	9.09	1.42	12.00	3.70	26.36	3.34
post	10.11	2.03	10.36	1.84	34.55	6.24	32.72	5.64
gain	3.78		1.27		22.55		6.36	
Mean Length Response								
pre	7.00	.87	6.81	.79	5.44	.97	5.00	.88
post	7.55	.65	6.45	.59	6.00	.70	6.36	.63
gain	.55		-.36		.54		1.36	
Incomplete Sentences								
pre	2.88	1.16	5.63	1.05	7.55	2.37	15.36	2.14
post	5.22	1.57	4.27	1.42	17.11	3.63	18.72	3.29
gain	2.34		-1.36		9.56		3.36	
Simple Sentences								
pre	3.11	.81	2.90	.73	3.33	1.74	9.63	1.57
post	4.00	1.01	5.27	.91	14.55	2.59	11.54	2.34
gain	.89		2.37		11.22		1.91	
Compound-complex Sentences								
pre	.33	.23	.54	.20	1.11	.51	1.36	.46
post	.88	.35	.81	.32	2.88	1.07	2.45	.96
gain	.55		.27		1.77		1.09	

Table 10. Continued.

Measure	Story I				Story II			
	Experimental		Control		Experimental		Control	
	\bar{X}	SE	\bar{X}	SE	\bar{X}	SE	\bar{X}	SE
Action Enumeration								
pre	5.88	1.08	8.18	.98	7.44	1.91	11.27	1.72
post	8.55	.89	8.54	.80	19.33	4.00	16.54	3.62
gain	2.67		.36		11.89		5.27	
Noun Enumeration								
pre	5.77	1.38	8.18	.98	12.66	3.63	17.09	3.29
post	9.11	1.29	9.81	1.17	27.44	5.25	25.90	4.75
gain	3.34		1.63		14.78		8.81	
Sequence Count								
pre	3.11	1.43	3.54	1.29	3.22	1.87	5.18	1.69
post	1.88	.86	3.63	.78	9.77	2.36	6.72	2.14
gain	-1.23		.09		6.55		1.54	

gain more than doubling the control gain on 10 out of 12 variables. Figures 4 and 5 illustrate these comparisons. A group comparison of the mean number of Incomplete and Simple Sentences is given in Figure 6. Story I shows the experimental group's regression in these qualitative measures along with the control group's progress. Story II shows a mixed pattern of growth for both groups, with the greatest increase in Simple Sentences for experimentals. As to the complexity of content of verbal expression, the experimental group gained more than the control in the use of action verbs and nouns in both stories. Sequence Count by controls remained relatively stable while experimental subjects used less references to sequence from pre to post in Story I, and more references in Story II. Figures

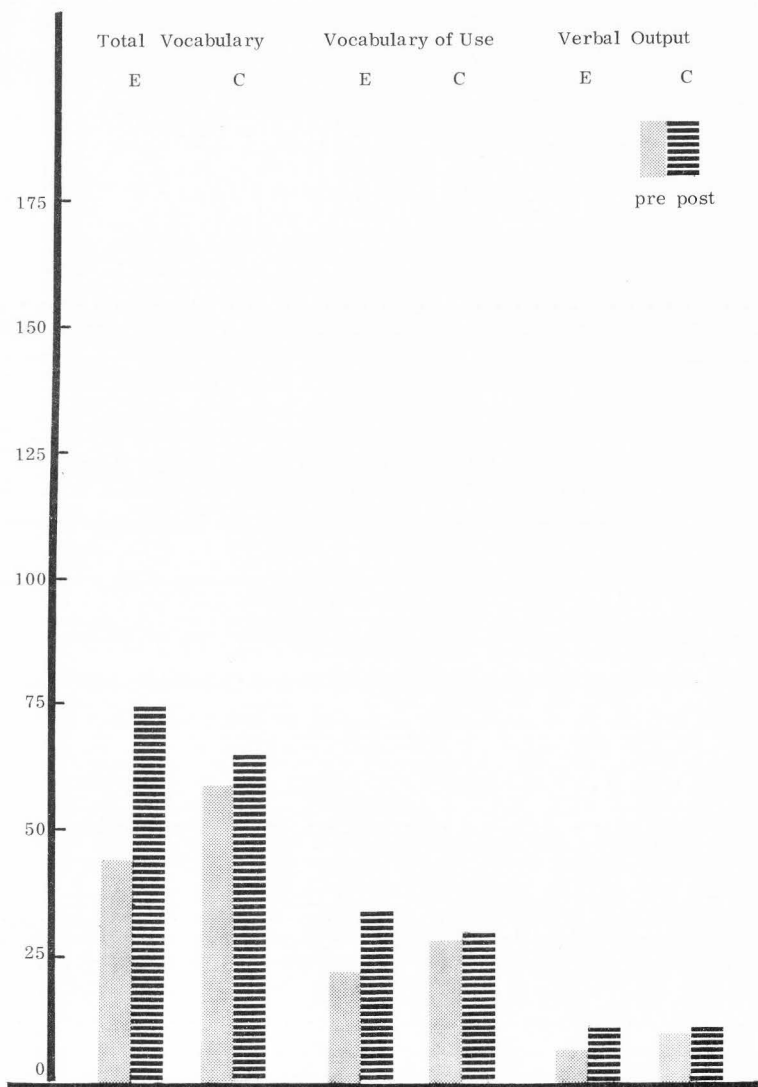


Figure 4. Pre- and posttest means on three vocabulary measures in Story I for experimental and control groups

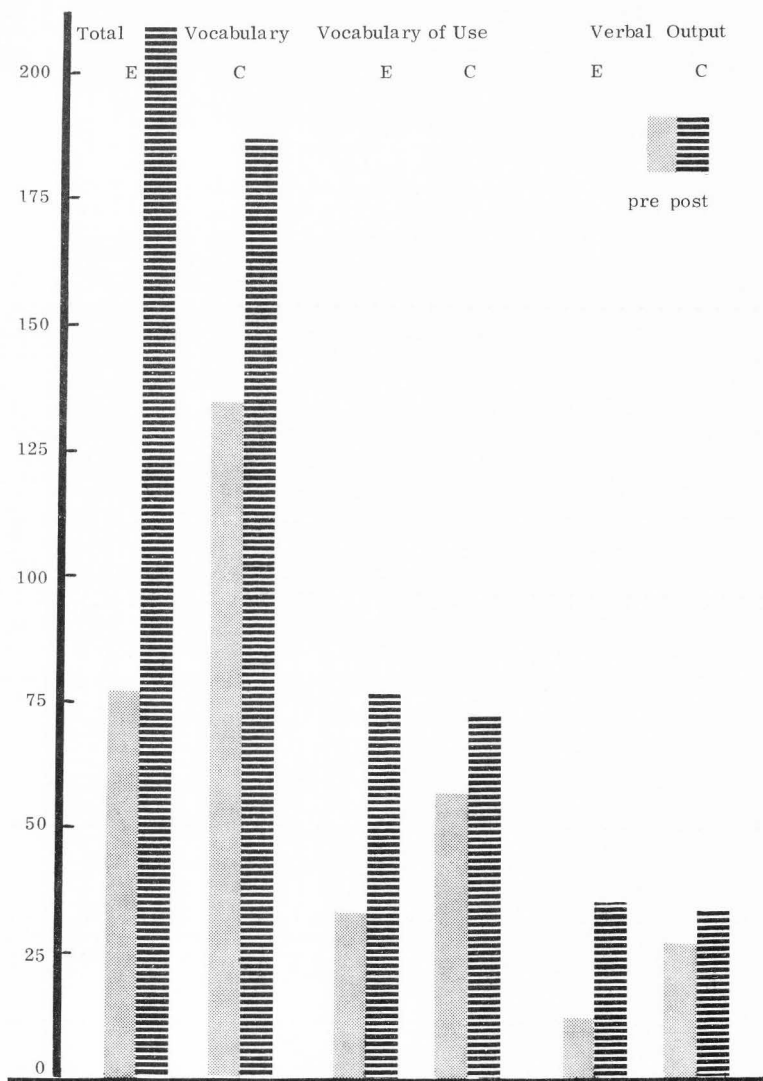
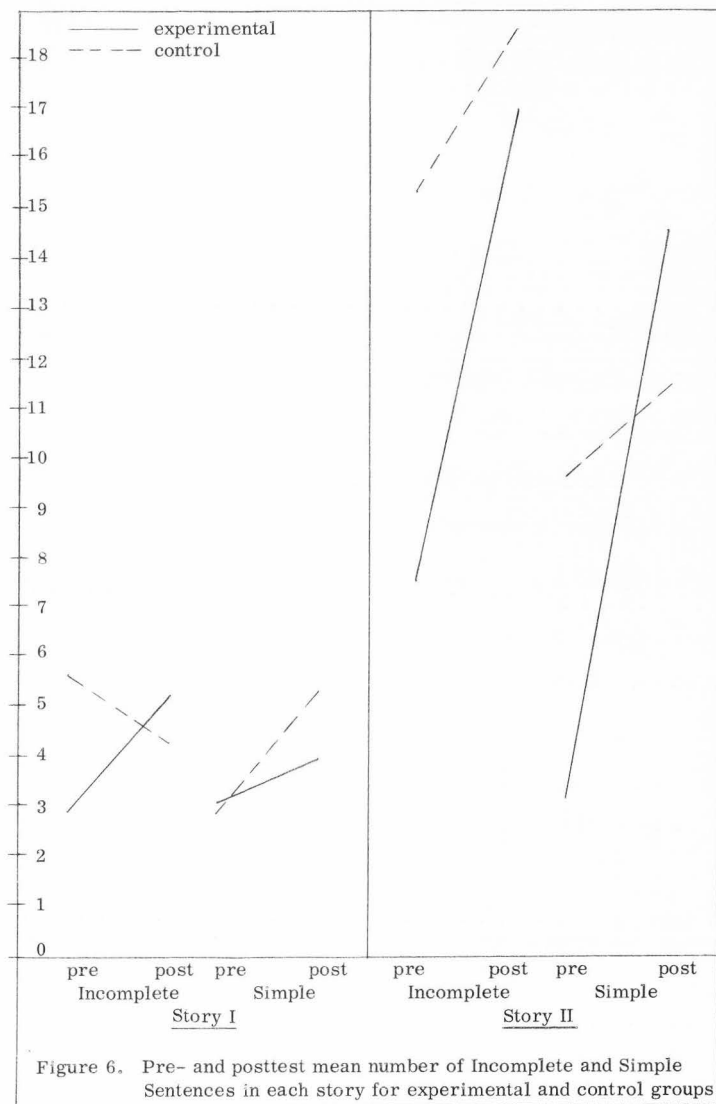


Figure 5. Pre- and posttest means on three vocabulary measures in Story II for experimental and control groups



7 and 8 portray the relative gains of experimentals and controls on Action Enumeration, Noun Enumeration and Sequence Count.

Although the hypothesized significant gain for experimentals over controls materialized only in Total Vocabulary of Story II, experimental group means showed consistent advantage over control group means on quantitative and qualitative measures for both stories. Experimentals, however, produced more Incomplete Sentences in both stories and trailed controls in Simple Sentences and Sequence Count for Story I, and in MLR for Story II.

In summary, these findings show that amidst a verbal bombardment enrichment program for Head Start children, short successive sessions of intensive language instruction with small groups can be effective in raising the level of verbal expression performance.

Discussion

Meaning of the findings in relation to objectives

The major objective of the present study was to conduct an intensive language program with Head Start children which would improve their verbal expression performance. The language program was based on story reading, active verbal participation by the children, and daily tutoring. The researcher believes that the language program carried out in the study contributed to the partial support of Hypothesis 1, that the experimental group would gain significantly from pre- to posttest on each verbal expression measure.

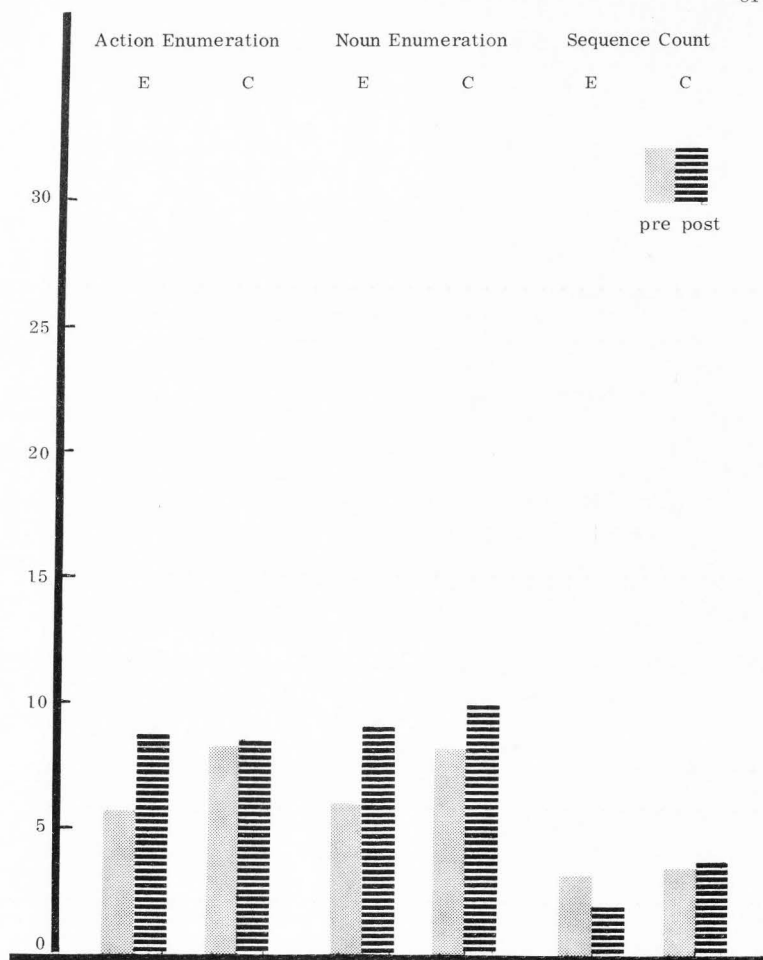


Figure 7. Comparison of gains by experimental and control groups in mean scores on Action Enumeration, Noun Enumeration and Sequence Count for Story I

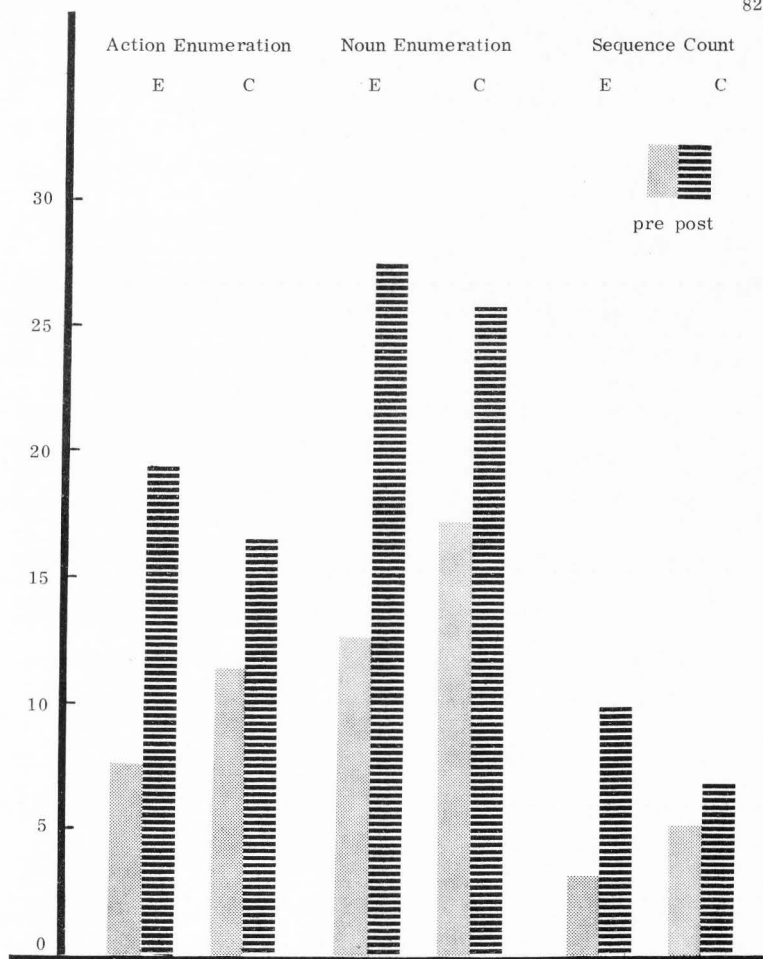


Figure 8. Comparison of gains by experimental and control groups in mean scores on Action Enumeration, Noun Enumeration and Sequence Count for Story II

A second objective of the study was to present a valid academic program to the Head Start children who served as control subjects, based on skills other than language use. The researcher believes that the actual academic program which necessarily included specific vocabulary and reasoning language instruction, contributed in part to the lack of support of the findings for Hypothesis 2, that the experimental group's pre-post difference would be significantly greater than the control group's pre-post difference on each verbal expression measure.

A further objective in the research design was to measure verbal expression performance by presenting two different tasks to the child in testing and to analyze the resultant data by ten broadly based criteria. The criteria which were used demonstrated that one can measure verbal expression in its quantitative and qualitative aspects, thereby revealing a pattern of performance in response to specific storytelling tasks. The findings reveal variability in performance between tasks and within groups. The experimental group achieved its greatest gains in vocabulary measures in the imaginative storytelling task. The control group showed steady improvement in most measures, but it was overshadowed by that of the experimental group.

Factors in the research design and process

Certain factors in the research design and process operated as contamination influences upon the data of the study. The researcher's activity as sole tutor and examiner undoubtedly introduced some bias which affected the experimental

subjects' performance both positively and negatively. Teacher expectations may have conveyed inadvertently positive effects upon performance; refusal to interact with the child during testing may have dampened performance. It is believed that a high level of rapport was established with all the subjects over the tutoring period, an advantage of the equal attention design. This continued buildup of rapport during tutoring may have contributed to better performance of both groups on posttest. The degree of objectivity attained in testing may have been a source of contamination. McDill et al. (1969) noted that the test-retest regression phenomenon predicts a higher score by the subject on retest without any increased knowledge. Overall progress in verbal expression by both groups reveals also the effect of language emphasis in the Head Start classroom experience. The objectivity of one person recording, transcribing, and scoring the data may be questioned. Spot-checking by independent raters showed close agreement in scoring selected measures, which lessened possible experimenter error.

The eclectic Head Start program scheduling resulted in lost days of tutoring and at times shortened tutoring periods. A minor problem developed from the expediency of removing a group of children from the regular classroom for separate instruction. This did not create an ideal learning climate. There was a feeling of competition for the children's time between the Head Start teachers and the researcher, which was only partially resolved by renewed mutually cooperative attempts to fit the research study into the daily plans of the Head Start classroom. Invariably some children were interrupted in the midst of a learning activity to attend the tutoring session. Attrition of subjects presented a major problem.

Although the initial number of subjects (28) was chosen to allow for attrition, the loss of subjects occurred mainly among the experimentals (cf. Sample) and mainly among the verbally outgoing and responsive subjects. The small total number of subjects in the random sample resulted in an uneven distribution of verbal expressiveness, as noted by comparison of pretest group mean scores. Whether this factor influenced the amount of learning during tutoring is not known.

Verbal expression in relation to testing and tutoring approaches

In order to interpret the particular gains made by either group from pre to posttest, one needs to consider the nature of the testing tasks as well as the tutoring programs. The structure of the tasks in testing determined their difficulty and the kind of responses engendered. It was believed easier for a subject to describe a series of pictures, interpreting what happened in the illustrated story (I), than to make up a story to fit some play characters, imagining what would happen to them in a thinking-out-loud monologue (II). The first task was finite, the second open-ended. It became obvious to the examiner that most subjects on pretest and most control subjects on posttest did not understand what it meant to "tell a story", i.e. minimally there must be a subject, some action, a beginning and an end to one's story. Adaptation strategies frequently used by subjects faced with the uncertainty of task II were:

- a. to identify the figures,
- b. to describe the figures' clothing,
- c. to line up the figures and count them,

- d. to move the figures around, in and out of the house, saying little about or for them, or
- e. to have a mock battle with figures chasing and knocking down other figures, accompanied by exclamatory phrases.

The story tasks differed also in type of manipulation of materials that was required. Story I followed the subject's manually arranging the pictures along a taped line on the table. Story II accompanied the subject's free movement of the standup figures on rug (pretest) or table (posttest), in and out of the house. As a result of these differences in structure and activity, one might expect fewer, longer sentences in the Interpretive Story and more, shorter sentences in the Imaginative Story. An inspection of Table 8 Verbal Output and MLR shows this to be the case. (The arbitrary restriction of Story I sample amounted to deleting one or two extraneous remarks.)

The tutoring techniques and materials contributed to the subjects' improved response to the storytelling tasks. In the tutoring program experimental subjects were read 14 illustrated stories which they practiced retelling with the use of the book's pictures and flannel board figures. They associated story content with illustrations, learning to interpret pictures and word meanings. They heard and used a variety of new words. The stories themselves were full of action highly interesting to a preschool child. These factors in the treatment program may account for the experimental group's significant gains in Vocabulary of Use (.01), Action Enumeration (.05) and Noun Enumeration (.05) in Interpretive Story I.

Imaginative Story II showed a greater number and more highly significant gains by the experimental group than the first story. Total Vocabulary (.01),

Vocabulary of Use (.0005), Verbal Output (.0005) and Noun Enumeration (.0005) increased from pre- to posttest. Sentence structure showed mixed improvement: growth in Simple Sentences (.0005) but also an increase in Incomplete Sentences (.01). Significant growth occurred in Action Enumeration (.01) and in Sequence Count (.01). Growth in vocabulary measures was attributed to the experience of hearing and telling stories and to the emphasis on active participation by each subject. It is postulated that as preschool children experience success and the power of verbal expression before an appreciative audience, not only does complexity of sentence grow but also speed in speaking. It was observed in this study that very verbal children often said so much so fast, it was difficult for the listener to separate distinct sentences. Also, in the telegraphic speech found to be typical of the preschool child, utterances classify as grammatically incomplete. It follows that increased verbal expression would include increased use of both types of sentences, simple and incomplete. The tutoring program provided daily opportunity for the individual child to express himself and be heard by others. This was carried out by discussion of the day's story, relating personal experiences, retelling a story with flannel board, and dramatization.

It is an interesting finding that Sequence Count in Story II by experimental subjects gained (.01) over tutoring while their sequence references in Story I declined. Sequential order was stressed in story reading and retelling during tutoring. Possibly, practice in the skill of verbally putting together a familiar story in sequential order enables the child to transfer this skill to constructing an imaginative plot of his own (II). Why then did this practice not assist the child in

interpreting story content in the sequence pictures? It is possible that some experimental subjects followed the instructions of the testing task I literally by describing the individual pictures, not seeing them as a composite story, but as separate sets of detail to be named. There were in fact six approaches to task I by the subjects on pre- and posttest, summarized below, which indicate degrees of awareness of sequence, in decreasing order.

- a. Subject summed up overall situation in one or two sentences, then after being directed to look at each picture, described sequence relating to topical sentence;
- b. Subject arranged pictures in sequence left to right, then described each as a part of the sequence of events, left to right;
- c. Subject arranged pictures left to right choosing at random, then looked at pictures in random order to relate sequence of events;
- d. Subject arranged pictures left to right randomly, then described each picture in order arranged with added comments to make sense out of that order, so that story hung together;
- e. Subject arranged pictures left to right randomly, then treated each picture as a separate entity regardless of order in which described, each boy a different boy in the picture; subject even expressed surprise in finding similarities between pictures, as same bike, same or another bloody knee;
- f. Subject used a detail of one picture to relate to self, to fantasize or personalize, needing direction to finish task.

The failure to utilize the sequencing skill in Story I may be interpreted from another perspective. Sigel and others (1966, 1967) found that disadvantaged children have difficulty achieving a representational, inferential interpretation of picture elements. The tutoring experience given experimental subjects in the present study, in interpreting the meaning of illustrations in conjunction with stories, may not

have been sufficient to alter a basic approach to pictures which is functional and descriptive, rather than inferential.

The control group showed no significant gains from pre to post in Story I but gained significantly in Story II on Total Vocabulary (.05), MLR (.025), Action Enumeration (.05), Noun Enumeration (.01) and Sequence Count (.05). The academic program for controls presented a variety of materials in a variety of ways. Expressive language was not encouraged, nor was it discouraged. Specific labeling vocabulary for objects and functions was taught in games and identification of materials. McAfee's (1967) style of using precise sentences in tutoring was followed. The academic program was as structured as the language program in some respects: instructions and demonstrations were given; tasks were defined; cause and effect reasoning was used; and learning was reviewed and reinforced. There was more manipulation of materials by control subjects during tutoring. Karnes et al. (1970) considered verbalization accompanied by manipulation of concrete materials, as in the game format or science activities, to be the most productive mode of establishing new verbal responses.

New vocabulary and concepts were taught through manipulation of the puzzle pieces, *Animals and Their Homes*, for example. Initially the control subjects were allowed to work the puzzle pieces as a group, undirected. Their approach to matching the pieces was an erratic trial and error method of interlocking the pieces with no attempt at using the pictures or idea of animal and home as clues. The game was then structured so that each child held a certain number of pieces and upon taking a turn, identified an animal picture and asked for the appropriate home for

the animal. New vocabulary was suggested when needed. A child was not given a matching piece until he identified or repeated the name of animal and home.

The feely box, an enclosed shoe box with hand holes on each end, was used in teaching identification of materials. The child was asked to feel an object and tell what it was before bringing it into view. The control subjects lacked labels for common objects. They were able to use descriptive terms of form or function, however. In identifying a bean bag, one boy stated, "It's a big thing--soft--has something in it." A girl upon feeling the rubber suction tip of a toy arrow commented, "Oh, I know--a thing you put in the toilet," with reference to a rubber plunger. A large paper clip was identified as "a thing you pick up paper with." Through manipulating materials in this way the control subjects learned specific labeling vocabulary.

The significant growth by controls in vocabulary and sequence measures cannot be attributed solely to the placebo scatter-gun tutoring approach which was used, however, when one considers that a great deal of language was being used by the children in the Head Start classrooms. For instance, two control subjects were overheard debating such topics as the reality of TV monsters versus the Deeburger Clown, and the behavior of alligators in a tank at the zoo. The stimulation of the total Head Start program contributed to the children's vocabulary growth.

For a direct comparison of verbal expression by individual subjects, verbatim verbal samples representing experimental and control subjects' performance in both stories are given in Appendix E, along with appropriate scores on the ten measures.

Tables 9 and 10 and Figures 3 through 8 illustrate the extent to which the experimental group outperformed the control group in the tasks of "telling a story" following the tutoring program. The group differences in means represent greater fluency but also increased power of vocabulary on the part of experimental subjects. A comparison of pre-post gains by each group in Story II (Figures 5, 6 and 8) points out a difference in the quality of verbal expression growth: whereas the control group gained significantly in sheer number of words and longer sentences, the experimental group gained significantly not only in number of words but in variety of word usage and in number of sentences, especially simple sentences. The experimentals' improvement in variety of vocabulary was consistent across both storytelling tasks. Both experimental and control groups advanced significantly in use of sequence in Story II, a finding which may be attributed to the attention directed toward cause-effect and serial order in both tutoring programs.

If greater gains for experimentals in vocabulary measures, in simple sentence construction, in use of verbs denoting action, and in awareness of sequence are a result of the language stimulation program, it would be profitable to take a closer look at the stories used in tutoring. The stories utilized (cf. Appendix B) were about animals and/or children in problem-solving situations. These problems usually were resolved successfully by the children, with quiet humor, against a background of family security and acceptance. About half the books were stories of fantasy, half of reality. The stories may be classified according to emphasis on these four aspects, as in Table 11.

Table 11. Classification of 14 stories used in tutoring, by content emphasis

Story	Child triumphs	Family security	Humor	Fantasy
The Carrot Seed	x	x		
Are You My Mother?		x	x	x
Just Follow Me		x		x
Nobody Listens to Andrew	x	x	x	
Ask Mr. Bear	x	x		x
The Gingerbread Man	x			x
Indian Two Feet	x	x		
Six Foolish Fishermen	x			x
Chicken Licken			x	x
Whistle for Willie	x	x	x	
Where the Wild Things Are	x	x		x
Good Hunting, Little Indian	x	x		
The Magic Fish				x
Humbug Witch			x	

Can the experience of hearing and retelling imaginative stories be used to foster imaginative storytelling by preschool children? The present study does not answer this question conclusively. By studying the protocols, the researcher found a definite trend toward more imaginative storytelling among experimental

subjects. Pre- and posttest stories (II) were tabulated in categories of discernible and improved plot construction. Table 12 shows the number of subjects in each group who used more imaginative plot construction from pre- to posttest in Story II. Columns 3 and 5 indicate growth in imaginative plot construction in the children's stories.

Table 12. Number of experimental and control subjects producing more imaginative plot in Story II posttest

Number of subjects	No plot on pre- or posttest	No plot on pretest; plot on posttest	Plot on pretest; similar plot on posttest	Plot on pretest; expanded plot on posttest	Percentage subjects with improved plot
9 E	2	2	0	5	(%) 77
11 C	4	3	2	2	45

Anecdotal evidence of language growth

It would be an oversimplification to base all indications of growth in verbal expression by Head Start children on numerical count of testing evidence. Admittedly subjective but illustrative anecdotes indicate an increased awareness of language.

During a demonstration of the uses of string, the researcher tied together two wooden blocks and asked, "Why can't you pull the blocks apart?" Some control subjects responded by trying to pull the blocks apart, not verbalizing their

ideas or experience. In a second demonstration, subjects pulled the blocks while verbalizing, "It doesn't break because it's a rope." "I can take it apart." "You can use a knife to cut it."

Experimental subjects enjoyed reproducing a story's dialogue in the retelling and they often embellished the author's expressions with their own idiom. The Magic Fish's standard regal retort, "What is it now?" became in one girl's version, an insistent, "Now what! You keep on worryin' me!"

While choosing standup figures prior to telling Story II on posttest, a control subject commented on the figures, "Stand 'em over here. When I get ready open th' door, she gon' git it, she gon' bonk down!" Then she hastily translated her observation for the benefit of the tutor, "She gon' fall down, huh."

One girl arrived in the tutoring room spouting jibberish, experimenting with sounds in an effort to imitate Spanish intonation she had heard. Another child felt addressed, reprimanding her indignantly, "You do not speak the Indian way! Speak English!"

An example of new vocabulary learned and assimilated came to fore in the comments of one experimental subject. Upon hearing the repeated phrase from Just Follow Me, "Little Dog asked, . . ." she questioned, "Why do you call Little Dog, 'Asked'?" Three weeks later the same girl greeted the tutor in the classroom, "You didn't ask to come in our room!"

These anecdotes exemplify a growing awareness of language uses: in reasoning, in elaborating, in translating codes, in ethnic identity, and in learning vocabulary meanings. Such evidence of growth should not be overlooked.

Findings in relation to other studies

Due to methodological differences in various studies of verbal expression, it is misleading to compare scores in language measures as an indication of age or ability levels. Table 6 shows the between study disparity in intercorrelations of measures. Mean Length Response ranged in the present study between means of 5.00 to 7.55 over treatments and groups. Templin reported an MLR of 5.70 for her total sample at age 5.0. In the present study, MLR increased significantly for controls in Story II, from 5.00 to 6.36 per remark. MLR was consistently higher for both groups in Interpretive Story I (an average MLR 6.70) than in Imaginative Story II (an average MLR 5.80). As Cowan et al. (1967) pointed out, MLR is not as reliable a measure as suggested in earlier studies, due to its variability under differing stimulus and examiner influences.

Mean percentages of responses in sentence complexity categories were reported in studies by McCarthy (1930), Davis (1937) and Templin (1957). Table 13 gives a comparison of data from these studies with that of the present study. The percentages of responses from the present study are based on a mean of 34.5 responses (by the experimental group, posttest Story II), instead of the standard 50 responses. Percentages of sentence types vary greatly between studies for comparable ages of subjects.

Templin compared the percentage of nouns in Total Vocabulary used by age groups in her sample with that reported by McCarthy.

... stability in the distribution in parts of speech of all words uttered after 3 years agrees with the results of the McCarthy

study on preschool children. . . . After three years the percentage of nouns used by her [McCarthy's] sample was stabilized near 20 per cent. . . . (Templin, 1957, p. 102)

Table 13. Mean percentage of responses in each of three sentence categories as found by McCarthy, Davis, Templin, and Sternad

Investigator	N	Mean age in years	Sentence complexity categories		
			Incomplete	Simple	Compound-complex
			(%)	(%)	(%)
McCarthy ^{ab}	20	4.5	40.0	46.9	12.9
Templin ^a	60	4.5	31.6	53.8	14.3
Sternad ^c	9	4.7	49.5	42.1	8.3
Templin ^a	60	5.0	29.8	52.6	16.8
Davis ^a	(not given)	5.5	54.4	37.2	8.2

^a Adapted from Templin, Table 43, p. 84, combined rows.

^b Data based on comprehensible remarks only.

^c Percentages based on 34.5 responses.

Figure 9 indicates the reported mean percentage of nouns used by subjects at age levels three to five years based on Total Vocabulary. The present data agreed more closely with Templin than with McCarthy.

The findings of the language intervention program are comparable to the results of programs described in Table 1. Cazden's (1965) expatiation group, Stern and Keislar's (1969) parallel prompting group, Blank and Solomon's (1968) tutored group 2 (three times/week) and Edwards and Stern's (1970) language groups exhibited qualified superiority over comparison groups in verbal

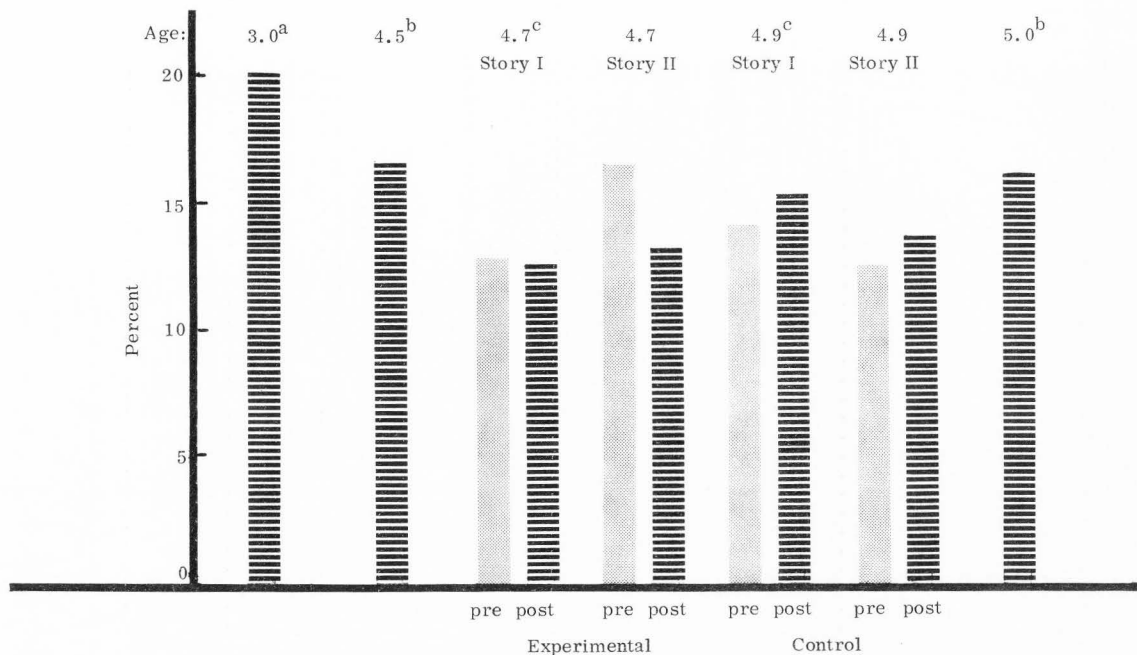


Figure 9. Mean percentage of nouns used by subjects three to five years, in three studies, based on Total Vocabulary

^aMcCarthy (1930), ^bTemplin (1957), ^cSternad (1972)

expression and other language measures. The present experimental group achieved proportionately greater gains in verbal expression than the comparison control group, as shown in Table 10.

SUMMARY AND CONCLUSIONS

Summary

Research on the disadvantaged predicts that the low income preschooler will become an underachiever in public school unless effective intervention strategies are found which will activate his potential in Head Start. A major handicap for this child is believed to be his language use. It is the goal of Head Start to develop the disadvantaged child's skills to prepare him for success in school.

The purpose of the present experimental study was to conduct and to evaluate one teaching method in improving verbal expression performance of Head Start children. The language stimulation program was based on story reading and retelling with active participation by the children in small group tutoring sessions. Tutoring proceeded an average of four days per week for seven weeks. Growth in verbal expression was determined by an analysis of stories told by each subject before and after tutoring, in response to two types of stimuli, sequence pictures and standup figures. Quantitative vocabulary measures and qualitative vocabulary, sentence structure and sequence measures were used in analyzing the stories.

Two morning Head Start classes in Ogden, Utah, contributed subjects for the study. The children were randomly assigned to two treatment groups, experimental and control, so that each classroom contributed half its enrollment to each

group. Twenty-seven children took part in the study, of whom twenty were used for the final sample: nine experimental and eleven control subjects.

Small groups of experimental subjects were tutored in the language stimulation program. Small groups of control subjects were tutored on an equal attention basis, in an academic program which emphasized the skill areas of numbers, directional games, and science activities.

The research study investigated the following hypotheses, that:

1. There would be a significant gain in the mean posttest score over the mean pretest score for experimental subjects on each of ten verbal expression measures.

2. The mean posttest score for experimental subjects would be significantly greater than the mean posttest score for control subjects on each of ten verbal expression measures.

Data were evaluated by comparison of group mean gains on the verbal expression measures. Statistical analyses were carried out for Hypothesis 1 with the Sandler's A test for correlated samples, and with analysis of covariance for selected variables in Hypothesis 2.

Hypothesis 1 was partially supported in that significant gains were made in 11 of 20 total verbal expression criteria, at .05 to .0005 levels. Hypothesis 2 was not confirmed statistically in 19 criteria, with Story II Total Vocabulary being the only significantly greater adjusted posttest score for experimentals than for controls, at the .05 level. A comparison of group means, however, indicated important growth in the direction of Hypothesis 2 in 14 other measures. The greater

gains in experimental group means represented growth in greater maturity of expression for those children who received the short-term language training.

The language stimulation program utilized techniques of adult-child meaningful interaction in brief daily small group sessions. These techniques were: presentation of high interest problem-solving stories; interpretation of picture and story content; one-to-one dialogue; expatiation in response to the child; active participation of the child in storytelling; and dramatization.

The academic program for control subjects offered a variety of materials and activities with emphasis on: specific vocabulary, manipulation, cause-effect reasoning, directions and number concepts. The characteristics of training in both programs were believed to be contributing factors to the kinds of growth exhibited by the respective subjects.

Conclusions

In conclusion, the findings indicate that the development of verbal expression of Head Start children can be accelerated by teaching methods. An intensive language stimulation program based on story reading does have merit in improving the verbal expression of Ogden Head Start children. More than one method may be effective, however. The experimental language training program was not sufficiently different in scope from the academic incidental language training of control subjects, to show conclusive superiority of the story reading teaching method and materials evaluated. Longer duration of the language training might reveal more

significant gains in performance. The small number of subjects used in the study makes it difficult to determine whether one method is, in fact, more effective than the other in improving verbal expression. The validation of the teaching method is therefore tentative.

Generalizing to the Ogden Head Start population under study, the researcher concludes from the findings that:

1. A seven-week intensive language program of daily small group tutoring sessions can produce significant improvement in verbal expression performance of Head Start children;
2. The medium of story reading used to promote discriminative listening and active verbal participation through retelling, leads to greater variety of vocabulary use and improved sentence structure;
3. Imaginative storytelling by Head Start children may be encouraged by a steady diet of high interest, well-illustrated storybooks in the regular program;
4. Specific, systematic instruction in academic content, whether it be analyzing stories or experimenting with concrete materials, produces an increased awareness and use of sequence skills;
5. The language stimulation tutoring program herein described may be recommended for use by Head Start teachers as one effective method of teaching verbal expression skills and enabling their performance.

Recommendations for Further Study

Several lines of investigation for further study are suggested by the present research:

1. The effect of physical activity on verbal expression performance;
2. A comparison of teaching methods using the same materials, e.g. story reading with dramatization versus story reading for listening;
3. A comparison of materials applied by the same teaching method, e.g. story reading with role playing versus using dress-up clothes in dramatic play;
4. The transfer of training sequence skills using manipulative toys to a sequencing task in storytelling;
5. Structure versus free play in furthering imaginative use of materials;
6. Verbal expression performance by the disadvantaged child along a continuum of settings: with parents at home, with peers at home, with peers in Head Start, with adults in the classroom, and with a single adult alone;
7. The use of puppets in promoting verbal expression;
8. Group size in instruction in relation to individual achievement;
9. The effect of flexible use of materials on problem solving.

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APPENDICES

APPENDIX A

Rules Followed for Classification of Words and SentencesA. Rules for counting the number of words.^a

1. Contractions of subject and predicate like "it's" and "we're" are counted as two words.
2. Contractions of the verb and the negative such as "can't" are counted as one word.
3. Each part of a verbal combination is counted as a separate word: "have been playing" counted as three words.
4. Hyphenated and compound words are one word.

B. Additional rules for counting words and phrases.^b

1. Counting words.
 - a. Singular or plural noun is counted as one word.
 - b. Partial word, if discernible in context, is counted one word.
 - c. Verb forms: inflection, as "come" or "comes", counted as the same word; tense, as "come", "came", "coming", counted as separate words.
2. Action Enumeration.
 - a. Single verb of action, as "goes", counts one.
 - b. Verb phrase combining several verbs denoting action, as "goin' to get dressed", counts one.
 - c. Verb phrase with adverb denoting the same action, as "gettin' ready to slide", counts one.
 - d. Verbs combined by conjunction when each verb denotes action, as "go there and get for supper", count two.
 - e. Verb "going" when used as future tense of a passive verb, as "goin' see", is not counted.
 - f. An active verb expresses action or movement. Examples: "cry, smile, shout, sit down". A passive verb expresses a state of being, with no movement. Examples: "look, see, say, talk, is, have, want, wish, sit".
3. Sequence Count.
 - a. Each reference to sequence is counted, not each individual word within that reference.
 - b. Repetitions of sequence reference within the same sentence are not counted, as "then, then he went".

C. Rules for dividing utterances.^c

1. The remark is considered finished if the child comes to a complete stop, either letting the voice fall, giving interrogatory or exclamatory inflection, or indicating clearly that he does not intend to complete the sentence.

2. When one simple sentence is immediately followed by another with no pause for breath, they are considered one sentence if the second statement is clearly subsidiary to the first.

D. Classification of sentence structure.^a

1. Incomplete sentences.

- a. Fragmentary or incomprehensible.
- b. Omitted verb, auxiliary, or participle.
- c. Omitted subject, from main or subordinate clause.
- d. Introductory "there" omitted.
- e. Omitted pronoun other than subject of verb.
- f. Omitted preposition.
- g. Main clause incomplete.
- h. Subordinate clause of complex sentence, or second clause of compound sentence incomplete. Example: "I know why."
- i. Essential words present, but sentence loosely constructed because of omission of conjunction, insertion or parenthetical clause, or changes in form halfway in sentence. Example: "We have -- my brother has a motorcycle."
- j. Omitted article.
- k. Omitted object from main clause or prepositional phrase.
- l. Sentence left dangling.
- m. Functionally complete but structurally incomplete. This includes naming; expletives; and other remarks, incomplete in themselves, which are clearly a continuation of the preceding remark.

2. Simple sentences.

- a. Simple sentence without phrase or with phrase used as adjective or adverb.
- b. Simple sentence with two or more phrases, compound subject or predicate.

3. Compound-complex sentences.

- a. Compound sentence: two independent clauses.
- b. Complex sentence: one main clause, one subordinate clause; or compound-complex sentence combination.

^a Adapted from Templin (1957) following Davis (1937) and McCarthy (1930).

^b Devised for the present study.

^c Adapted from Templin (1957) following Davis (1937).

APPENDIX B

Bibliography of 14 Stories Used in Tutoring

- Anderson, Paul S. 1963. Story Telling With the Flannel Board. Book One. T. S. Denison and Company, Inc., Minneapolis, Minnesota. The text of "Chicken Licken".

- Artists and Writers Guild, Inc. 1944. The Tall Book of Nursery Tales. Harper and Row, Publishers, New York. Illustrations for "Chicken Licken".

Chicken Licken gathers some barnyard friends to tell the king that the sky has fallen. The owl explains it was only an apple falling on his head. Vocabulary: medium difficulty. Reading time: 4 minutes (8 pp.).

- Balian, Lorna. 1965. Humbug Witch. Abingdon Press, Nashville, Tennessee.

The story is written in tongue-in-cheek humor about a little girl who dresses up to be a witch but cannot hex her skeptical cat. Vocabulary: difficult. Reading time: 5 minutes (27 pp.).

- Eastman, P. D. 1960. Are You My Mother? Beginner Books, Inc., Random House, New York.

A baby bird searches for its mother. It meets a cat, a chicken, a dog, a cow, an old car, a boat, an airplane, and a steam shovel, mistaking each for the mother bird. Vocabulary: simple, repetitive. Reading time: 5 minutes (61 pp.).

- Elkin, Benjamin. 1957. Six Foolish Fishermen. Childrens Press, Chicago, Illinois.

A small boy solves the problem of six fishermen who fear they have lost a brother when each forgets to count himself among the six. Vocabulary: simple, repetitive, use of prepositions. Reading time: 7 minutes (30 pp.).

- Erickson, Phoebe. 1960. Just Follow Me. Follett Publishing Company, Chicago, Illinois.

A little dog strays away from the barnyard and meets other animals near their homes while he looks for his way home. Vocabulary: medium difficulty, repetitive. Reading time: 6 minutes (26 pp.).

Flack, Marjorie. 1932. Ask Mr. Bear. The Macmillan Company, New York.

A boy asks various animals what to give his mother for her birthday. Mr. Bear has a fitting suggestion. Vocabulary: simple, repetitive. Reading time: 7 minutes (32 pp.).

Friskey, Margaret. 1959. Indian Two Feet and His Horse. Childrens Press, Chicago, Illinois.

A boy earns the right to own a horse by finding and caring for one. Vocabulary: simple. Reading time: 4 minutes (58 pp.).

Guilfoile, Elizabeth. 1957. Nobody Listens to Andrew. Follett Publishing Company, Chicago, Illinois.

Andrew has trouble convincing his family there is really a bear on his bed. Noone takes time to listen to him. Vocabulary: simple, repetitive. Reading time: 4 minutes (24 pp.).

Keats, Ezra Jack. 1964. Whistle for Willie. The Viking Press, New York.

Peter tries but cannot whistle for his dog, Willie. Finally, he succeeds. Vocabulary: medium difficulty. Reading time: 4 minutes (28 pp.).

Klugmann, Judith. 1962. My Very First Story Book. "The Gingerbread Man". Doubleday and Company, Inc., Garden City, New York.

This traditional nursery tale is enlivened with dialogue. Vocabulary: simple, repetitive. Reading time: 4 minutes (20 pp.).

Krauss, Ruth. 1945. The Carrot Seed. Harper and Brothers, New York.

A boy plants a carrot seed but is surrounded by doubters. The carrot plant not only grows, it produces a giant carrot. Vocabulary: simple, repetitive. Reading time: 3 minutes (24 pp.).

Littledale, Freya. 1967. The Magic Fish. Scholastic Book Services, New York.

This story is a fable about an humble fisherman and his greedy wife. Vocabulary: medium difficulty, repetitive. Reading time: 7 minutes (45 pp.).

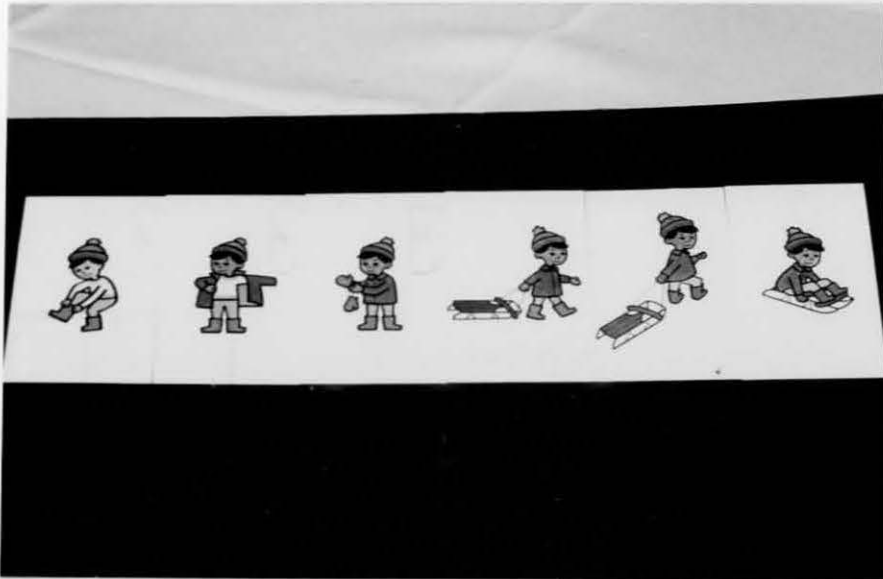
Parish, Peggy. 1962. Good Hunting, Little Indian. Young Scott Books, New York.

A young hunter tries his luck at bringing home some meat for dinner, with unexpected results. Vocabulary: medium difficulty. Reading time: 5 minutes (46 pp.).

Sendak, Maurice. 1963. Where the Wild Things Are. Harper and Row, Publishers, New York.

A small boy's fantasies carry him from his room, where he was sent for misbehaving, to an island inhabited by wild monsters. Although they make him king of all wild things, he soon returns home "where someone loves him best of all". Vocabulary: difficult. Reading time: 4 minutes (37 pp.).

APPENDIX C

Photographs of Pretest and Posttest Testing Materials

1.

Photographs of pretest testing materials: sequence pictures for Story I; standup figures and cardboard house for Story II



2.

Photographs of posttest testing materials: sequence pictures for Story I; standup figures and cardboard house for Story II

Gains in Vocabulary and Sentence Complexity
Measures for Controls

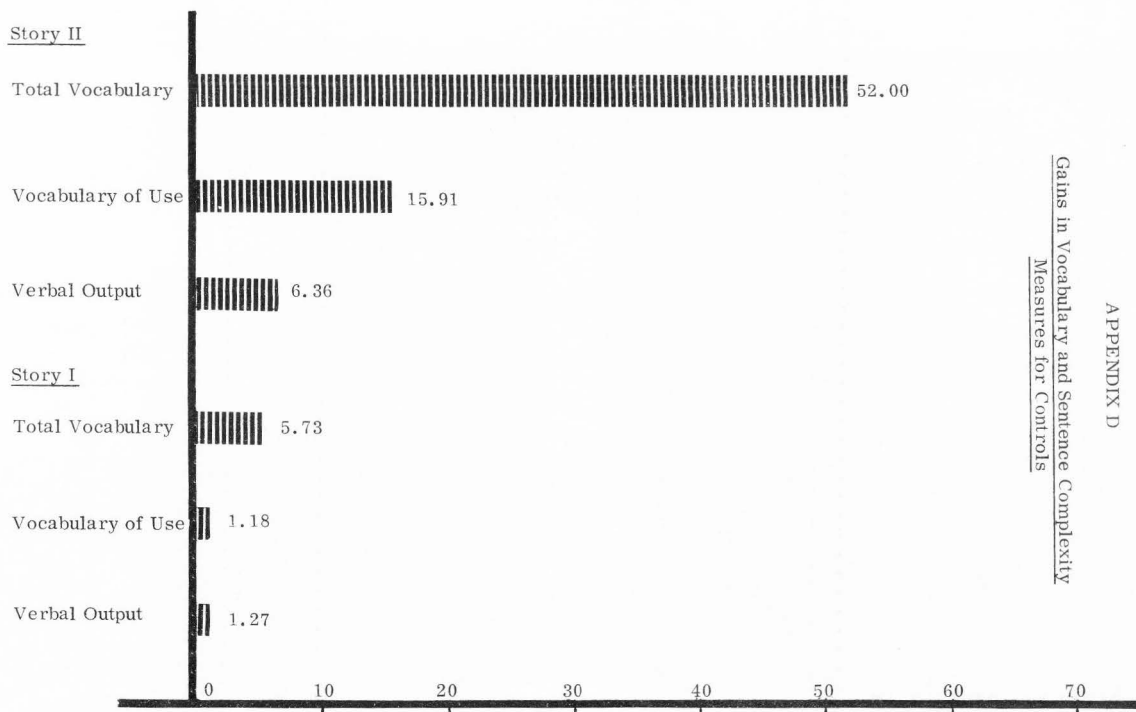


Figure 10. Gains in pre- post means for control subjects on Total Vocabulary, Vocabulary of Use and Verbal Output measures in Story I and Story II

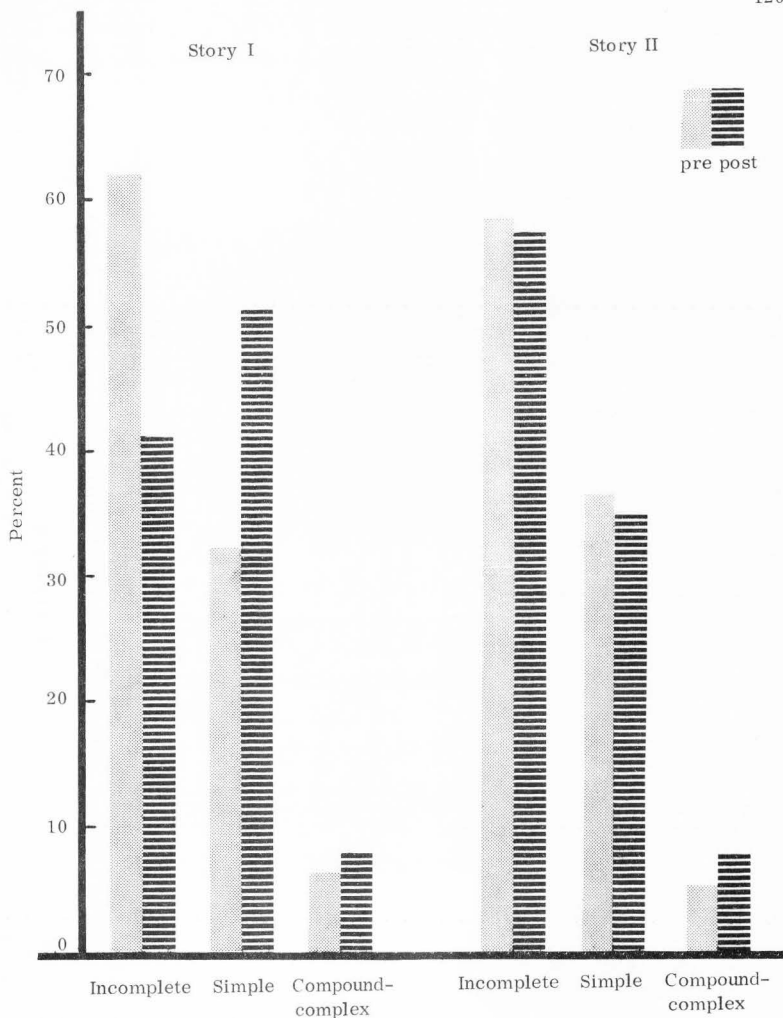


Figure 11. Percentage of pre- and posttest responses in sentence complexity categories, by control subjects in Story I and Story II

APPENDIX E

Verbal Samples Representing Subjects' Performance in Story I and Story II, with Resultant Scores on Ten Verbal Expression Criteria

1. Experimental subject A, Story I:

Pretest

A—that little boy s'lyin' on the skeet. An' lil' boy not sittin' on his, he pullin' de string. That lil' boy not settin' on, he's pullin' de string. That lil' boy puttin' his glove on. 'N that lil' boy puttin' his boots on. An' that lil' boy puttin' his globv on. Tha' all.

Posttest

Lil' boy cried because his knee is bleeding. OK. 'N he comes running to Mama. 'N he said, "Mama, my knee is bleeding." Said that. An' da lil' boy begin to ride (h)is bike. An', an' he fell down an' hurt (h)is knee. An' hi(s) Mama had to put a bandaid on. An' he begin to ride (h)is bike.

<u>Measures</u>	<u>pre</u>	<u>post</u>
Total Vocabulary	56	59
Vocabulary of Use	21	31
Verbal Output	7	9
Mean Length Response	8.0	6.6
Incomplete Sentences	6	2
Simple Sentences	1	5
Compound-complex Sentences	0	2
Action Enumeration	5	9
Noun Enumeration	12	11
Sequence Count	1	1

2. Control subject B, Story I:

Pretest

Has to be a name--, I don't know what. I don't know. Boy's gettin' ready t'ride his sleigh. He's puttin' his gloves on. First he's puttin' his boots on. Then his coat. Then he t'go outs(ide). Then he gets his sled 'n he goes out 'n rides it. (Th)en goes down that hill.

Posttest

The boy fell. An' he cried. An' (h)e was a-bleeding. An' he, an' there's a log in the way. Then he fell. Then he ran home. Then he mo--, then his mother put a bandaid on him. Then he went back an' got his bike and rode it home.

<u>Measures</u>	<u>pre</u>	<u>post</u>
Total Vocabulary	58	50
Vocabulary of Use	35	28
Verbal Output	9	8
Mean Length Response	6.4	6.3
Incomplete Sentences	4	2
Simple Sentences	4	6
Compound-complex Sentences	1	0
Action Enumeration	8	9
Noun Enumeration	8	8
Sequence Count	6	4

3. Experimental subject C, Story II:

Pretest

He go in. I'm gon' take the fat pig in. He says, "Hey, girl, come in an' tell me a story." She say "No, you come out." An' he comes out and play with her little, he baby. He--. Take him in. There's some horsies. Oops. He say, "Come out," an' he say, "I want you t' come out 'n play w'the kitty cat." He come out. He come out, play w'the kitty cat. There.

Posttest

Here's a big. I'm gon' count 'em: one, two three, four, five, six. That dog was running away. The little girl running after h(im) says, "Grandma, Grandma, the dog's running away!" An' the Grandma come out. An' then the, then the doggie runned fast but the Grandma caught him. Took him in the house. And the little girl got lost, so she running and she's lost far, far away. And the kids running after. And then they couldn't find her, so they called for their Grandma and she opened the door. And she, and Grandma came out. The dog had t'stay in. And then the Grandma and the sister went running after-?-. They, they caught her. Put'n -?- -?- -?-. The Grandma went in. An' then they both ran away. The sister called the Grandma. She opened the door. The little girl fell out. So -- came -- out. An' she had ta go find the kids. She took 'em in. All of them went in. And the -?- get the -?-, stand 'em up. 'N that was the end.

<u>Measures</u>	<u>pre</u>	<u>post</u>
Total Vocabulary	79	178
Vocabulary of Use	38	71
Verbal Output	13	26
Mean Length Response	6.1	6.9
Incomplete Sentences	7	10
Simple Sentences	3	14
Compound-complex Sentences	3	2
Action Enumeration	13	28
Noun Enumeration	9	24
Sequence Count	0	8

4. Control subject D, Story II:

Pretest

Like that? Now he's bigger. He's bigger 'n--.
He's little 'n he bigger. No he, how can, how can they -- read(y) to go in th' house? Th'. This is a horse, but -- a -- he's little. No, no, he's be 'side. He big, 'n he's little. Ow. That. How come they ain't ready to go in the house? They need to! Da door's shut. This is dat. Who's out there? Yeah. Knocked on the door. Pig was goin' be 'side. He was walk in then, looked at the horse. And--. Then he was goin' be 'side to that house. 'N then the horse goin' be 'side, the pig. 'N then he say, --. Does he say "Ar-ar"? 'N den he say "Ar-ar". Now do you wan(t) me put this back?

Posttest

'Ma spread 'em all here. Now once on a lil' time dere was a doggie runnin' to da boy. An' then da boy was stan-din'. This (h)as to be a boy. 'N den d'big boy wears a cow-boy hat an' he wears a, a belt. 'Nen his sister belong to read a book. Den da--what? What zis? That, this is a Dad. Bu(t) he wearin' high heels. Den da Dad would belong, go to da doctor. Den dis hor-r dat he would belong to wear a belt. Now 'mgo put 'em in here. Wait, wait, he don('t) open th' door. Why'n we bring th' house o(ve)r here. 'N dat's where dat man lives. "Knock, knock." "Who is it?" "It's me." "Well, open da door." "I can't." "Push, push da open." "OK." "Dere." "Knock, knock." "Who is it?" "I(t's) me--big boy." "Open da door." "Can't." "Dere." Now he belongs inside. "Knock, knock." "Who is it?" "It's a lil' boy." "Come in." Go in th'--. "Ruff, ruff, ruff, ruff." I need to put'm on --?. Dere.

Measures

	<u>pre</u>	<u>post</u>
Total Vocabulary	136	182
Vocabulary of Use	56	77
Verbal Output	27	39
Mean Length Response	5.0	4.7
Incomplete Sentences	19	22
Simple Sentences	6	15
Compound-complex Sentences	2	2
Action Enumeration	5	11
Noun Enumeration	10	22
Sequence Count	7	10

VITA

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Candidate for the Degree of

Master of Science

Thesis: The Use of Story Reading as a Method of Improving Verbal Expression of Head Start Children

Major Field: Family and Child Development

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