

This is to certify that the

thesis entitled

AN INVESTIGATION DESIGNED TO TEST THE
FEASIBILITY OF USING VISUAL LITERACY TECHNIQUES
AND THE LANGUAGE EXPERIENCE APPROACH
TO READING TO DEVELOP THE READING ABILITIES
OF REMEDIAL FOURTH GRADE READERS
presented by

has been accepted towards fulfillment
of the requirements for

Doctoral degree in Elementary & Special Ed.

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are needed, too, for those students who have only marginal command of language by the time they reach school because of restricted experiential backgrounds and other related reasons. Fluency in oral language ability and a wide range of experiences give the student a foundation or framework for future learning through reading. Without these backgrounds to build on, concept development and understandings of ideas are seriously restricted.

Visual literacy is a set of abilities to see, discriminate and interpret observable actions, pictures, picture sequences, objects or symbols. The process involves the development of literal, interpretive and critical thinking skills. Visual literacy based on a person's experiences is being recognized by noted linguists, philosophers, psychologists, physiologists, sociologists, archaeologists, and urbanologists as an important aspect of learning.

There is a controversy about the use of wordless picture books for teaching. Cianciolo⁷ suggests that picture books may be used to teach reading through the language experience approach to beginning readers, illiterate adults and remedial reading students. The uses of wordless picture books recommended by Cianciolo are to develop literal and figurative interpretations and for the study of

⁷Patricia J. Cianciolo, "Use Wordless Picture Books to Teach Reading, Visual Literacy and to Study Literature," Top of the News, Vol. XXIX, No. 3 (April, 1973), pp. 226-234.

literary devices, literary style and literary theme. In rebuttal to Cianciolo's article Groff⁸ argues that our society is already too dependent on visual messages to the extent that reading of literature is largely neglected. Groff bases his argument on five basic premises: (1) children have extensive experience with television picture plots yet are not superior readers, (2) greater amounts of mental effort are required for reading literature than for "reading" pictures, (3) a difference exists between the types of affective responses stimulated by literature and wordless picture books, (4) picture books serve no separate function from that of picture books having a storyline, and (5) support by educators for wordless picture books indicates a deemphasis on reading. McLuhan⁹ warns against the subtle and altering role which visual electronic media plays in altering our perceptual awareness. The National Council of Teachers of English and the Children's Book Council sponsored a meeting in New Orleans on November 27, 1974 to debate the use of visual literacy materials in language development.

⁸Patrick Groff, "Children's Literature Versus Wordless Picture Books," Top of the News, Vol. XXX, No. 3 (April, 1974), pp. 294-303.

⁹Marshall, McLuhan, Understanding Media: The Extension of Man, Second Edition, New York, New American Library, Inc., 1964.

A number of studies lend support to the use of visual literacy. Some of these studies are cited in the following statements along with significant aspects of these studies and implications derived from them. Deno¹⁰ used verbal and pictorial symbols in observing processes which undergird perception. He found that pictures used with undergraduate students generally are an aid to learning the verbal symbol that the picture represents. The implication is that pictures can be a valuable aid to verbal learning.

In a study by Bourisseau, Davis and Yamamoto,¹¹ samples of verbal associations which elementary school children expressed when verbal symbols, pictorial representations and combinations of the two were presented. The findings indicated that visual representations of ideas were superior to verbal symbols in evoking specific concrete responses. However, a greater number of sensory responses were elicited by the use of words alone. The value of this study was the indication of differing yet supportive relationships between visual representations and words. Based on a study conducted with a target population of four

¹⁰Stanley N. Deno, "Effects of Words, and Pictures as Stimuli in Learning Language Equivalents," Journal of Educational Psychology, Vol. LXI (June, 1968), pp. 202-206.

¹¹Wm Bourisseau, O. L. Davis, Jr., and K. Yamamoto, "Sense Impression Response to Differing Pictorial and Verbal Stimuli," Audiovisual Communication Review, Vol. XIII, No. 3 (Fall, 1965), pp. 249-258.

and five year olds Strandberg and Griffith¹² compared the language development of children that received special training in visual sequential activities with a control group. Findings were that the students in the experimental group had greater complexity in language skills used to describe their pictures. LaPolt¹³ conducted a study focusing on the use of visuals as a basis for student writings. Conclusions reached by LaPolt were that when students wrote stories based on pictures which they had taken themselves their writing in relation to the pictures increased in the number of happenings. Further, she found that these students had less difficulty with sentence and paragraph structure than they had experienced prior to participation in the project. Fransecky found that visual literacy was a valuable reinforcement to strengthen students' understandings of environments. Knowledge, theory and technology are the bases on which visual literacy is founded. It was not until the 1960's that technology was well suited to the development of visual literacy. Much of our learning is accomplished through the visual. Television, movies, films, slide sets, and other visual media

¹²Twila E. Strandberg, and Perry Griffith, A Study of the Effects of Training in Visual Literacy on Verbal Language Behavior, Charleston, Illinois, Eastern Illinois University Lithography (July, 1968).

¹³Ruth LaPolt, "A New Approach to Visual and Written Sequencing," Audiovisual Instruction, Vol. XII, No. 5 (May, 1968), p. 477.

have had a tremendous impact on visual learning. These educational media are becoming an integral part of all areas of the school curriculum rather than being tacked on to the curriculum for entertainment for use when time allows.¹⁴

Visual literacy methods are effective in securing children's attention and help them in self-development and perception. These methods provide a new means for students and their teachers to develop communication skills in a unique and meaningful way.¹⁵ Materials of visual literacy can serve as learning stimuli for students who may have formerly been disinterested in traditional schools. These visual materials also may make the students less apprehensive about learning so that they can effectively approach related verbal literacy learning.¹⁶

Educational Implications

The procedures for this study involved the use of selected non-narrated films and wordless picture books as a basis for remedial fourth grade reading students' oral and written language development. These transcribed oral

¹⁴James Brown, Richard Lewis, Fred Harclerod, Media Methods, New York, McGraw-Hill, 1969.

¹⁵Roger B. Fransecky, Roy Ferguson, "New Ways of Seeing: The Milford Communication Project," Audiovisual Instructor, Vol. XVII, No. 4 (April, 1973), pp. 44-49.

¹⁶Hans Möller, Media for Discovery, Toronto, McClean Hunter Limited, 1970.

and written language samples were used for the development of each student's reading vocabulary and comprehension. The use of visual literacy materials and the language experience approach in the remedial reading program could serve as an innovative means of developing each student's reading abilities. Instead of dealing with the reader's problems through the basal reader approach with which he has already had difficulties, the child's oral language and its written form serve as a basis for his developmental program in reading. Rather than rote drills on specific areas in which a student is weak, the language experience approach builds on the student's language successes. The combination of the visual literacy materials and the language experience approach to remedial reading constitutes a different approach to corrective work than has previously been offered in traditional remedial reading programs.

The student is dealing with pictures, a means of communication which has been through history and continues as an elementary and important means of communication. Pictures are more concrete than words; thus visuals are usually more readily comprehended than written or spoken forms of language. Visual literacy materials make possible the fusing of cognitive, affective and psychomotor elements within the reading program.¹⁷ Visuals can be effective

¹⁷Steven Barley, A Visual Literacy Approach to Developmental and Remedial Reading, Rochester, New York, Eastman Kodak Company, 1969.

means of reaching non verbal students.

Because of the large amount of visual materials which our society views each day, it is important that individuals develop skills in "reading" these visual communications and in effectively selecting among them. Lee¹⁸ suggests that educational experiences should be provided which provide a wide horizon for a child's world and serve to strengthen the way in which he senses that world, help him consider his thoughts about his world and make free reading choices available. The combination of the visual literacy materials and the language experience approach can make the attainment of the preceding goals possible. Further, these methods and materials make possible the cyclical development of language through direct interaction with language through reflection, expression, and reception in motivating settings. Rosen¹⁹ recommends this interaction with ideas in an atmosphere conducive to learning.

Statement of Research Hypotheses

First Hypothesis

Visual literacy materials used in the language experience approach to reading will result in growth in read-

¹⁸Doris M. Lee, "Reading as Contact," Educational Leadership, Vol. XXIV, No. 5 (February, 1967), pp. 413-417.

¹⁹Carl Rosen, "Reading and the Disadvantaged, Some Psycholinguistic Applications for the Classroom Teacher," Views on Elementary Reading Instruction, Thomas Barnett

ing facility when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05.

Second Hypothesis

There will be increased facility in oral expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05.

Third Hypothesis

There will be increased facility in written expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05.

Fourth Hypothesis

Visual literacy materials used in the language experience approach to reading will result in improvement of students' attitudes toward reading significant at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Explanation of Research Hypotheses

First Hypothesis

Visual literacy materials used in the language experience approach to reading will result in growth in reading facility when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05. As a result of participation in this study it is expected that students will improve their reading skills. Students will have many experiences with words as they write stories. As they dictate stories to this researcher, to one another or on tape recordings followed by reading transcribed versions of these oral stories students experience another means of associating with words. Students will thus develop significant increases in vocabulary understandings.

The subject matter on which student writing will be based is common vicarious experiences the participants

will have via non-narrated films and wordless picture books. Students will work with their stories word by word, and sentence by sentence based on visual experience which they have had. Significant increases in reading comprehension are expected.

Students will be working with the communication process from both the writer's and the reader's points of view.

Second Hypothesis

There will be greater facility in oral expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05. Participating students are expected to make significant achievement in skills of oral expression. As a result of participating in this study students will increase the number of happenings presented in their stories. The students' discussions of these happenings will be in greater detail as students gain new understandings of the visual materials and experience success in using them in the language experience reading activities. The total number of words students use in their writing will also increase significantly.

Third Hypothesis

There will be greater facility in written expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05. Students are expected to make significant increases in abilities in written expression. Through the development of vocabulary words and ideas as they relate to wordless picture books and non-narrated films students will have an increase in the numbers of incidents which they develop. The depth of writing in relation to the incidents presented will be increased along with the total number of words used.

Fourth Hypothesis

Visual literacy materials used in the language experience approach to reading will result in improvement of students' attitudes toward reading significant at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension. As students write and read their own stories and read stories written by other students participating in this study it is expected that students will have a significant increase in positive attitude towards reading.

Assumptions

The first assumption is that there is such a thing as visual literacy. Visual literacy consists of a set of vision abilities a person develops along with other sensory experiences. The development of this set of vision abilities is basic to human learning. A visually literate person can discriminate likeness and differences in observable actions, objects, pictures, or picture sequences as well as interpret them. The process involves the development of skills in literal, interpretive and critical thinking.

A second assumption is that reading is a complex process involving a number of skills which includes comprehension, word analysis techniques and sight vocabulary. Rather than being a simple mechanical skill, reading consists of organization of patterns of higher mental processes. Skills of thinking, evaluating, judging, imagining, reasoning and problem solving are all a part of the reading process.

The third assumption is that each child has some potential for creating reading materials and that he can express his efforts through the medium of oral and/or written language. It is further assumed that the wordless picture books and non-narrated films will serve as a suitable basis for student writings. Students can tell about their visual experiences while the researcher takes dictation or

students may write down their own ideas, or record them on tapes. Oral and written language are closely related. The quality of ideas expressed in children's written language is similar to their oral language expression.

Design of the Study

The basic design of this study is a one group pre-test/posttest type. The procedures to be utilized will focus on the development of each student's reading abilities, language abilities and communication skills. Visual literacy materials including select wordless picture books and non-narrated films will be used as a basis for the development of students' abilities in oral and written expression and their reading vocabulary and comprehension.

Alternate forms of the California Reading Test will be administered as pre and posttest. The Auburn Reading Attitude Scale will be administered as a pre and post measure. Pre and post written samples will be collected and compared, as will transcribed oral samples. The Kellogg Hunt T Unit will be used along with total words as a measure of the students' written and oral increases.

Definitions of Terms

Visual Literacy

Visual literacy is a set of abilities to see, discriminate among and interpret observable actions, pictures,

picture sequences, objects or symbols. The process involves the development of skills in literal interpretive and critical thinking.

T Unit

Minimal terminal units which are grammatically capable of being terminated with a capital letter and a period. This measure is similar to simple sentences. The concept differs from sentences because the compound and complex sentences are broken up. Run on sentences are also separated.

Language Experience Approach

The language experience approach is a type of instruction in which a child's reading material is based on his written language and the oral language which is recorded in written form. This includes writings and transcribed stories by other students in the class.

Remedial Reader

Remedial reader as used in this study is a student of normal intelligence who for any of a number of reasons is a year or more behind his grade expectancy level in skills or word recognition and/or comprehension.

Normal Intelligence

Normal intelligence includes those students who score within the range of ninety to one hundred on the Lorge

Thorndike Intelligence test or the Weschler Intelligence Scale for children.

Reading Expectancy

Reading expectancy is the extent to which a child might grow from one level to another in reading facility under favorable circumstances. The level of reading expectancy is computed by multiplying a child's IQ by the number of years he has been in school and adding one. This gives a grade level which can be compared with the child's reading achievement grade score. The formula for the computation of grade expectancy as described above is as follows:

$$\text{IQ} \times \text{years in school} + 1.0 = \text{grade expectancy.}$$

Examples.--A student with an IQ of ninety at the start of fourth grade has been in school three years. The IQ of 90 indicated as .90. Computation $(.90 \times 3 \text{ years}) + 1.0 = 3.7$ grade expectancy. For a student with an IQ of 100 at the middle of fourth grade (3.5) years in school. Computation $(1.00 \times 3.5) + 1 = 4.5$ grade expectancy.

Wordless Picture Books

Wordless picture books are those books consisting of a sequence of illustrations which tell a story without the use of a verbal text.

Non-narrated Films

Non-narrated films are motion pictures which may have background music but with no verbal sound track.

Word Bank

A collection of vocabulary words which an individual student keeps on file cards. These are words that a student wants to learn to spell or desires to use more accurately.

Facility in Writing

As used in this study facility in writing consists of increase in the students' total written words, T Units and words per T Unit.

Fluency in Oral Language

As used in this study fluency in oral language indicates an increase in students' total words, T units and words per T Unit, used in an oral language sample.

Cloze Procedure

A process in which a word is left out of a sentence. The student must use the context of the sentence to determine what word or words will make sense in the sentence.

Overview

Chapter I began with a statement of the problem. The focus of this research project was on the development

of participating students oral and written language abilities, and their reading abilities through the use of visual literacy materials and the language experience approach to reading.

The educational implications for the study and background information deemed relevant to this study were presented. An overview of literature focusing on the language experience approach to reading and on visual literacy was then developed.

The hypotheses of this investigation were:

1. Visual literacy materials used in the language experience approach to reading will result in growth in reading facility.
2. There will be greater facility in oral expression as a result of using visual literacy materials within the language experience approach to reading.
3. There will be greater facility in written expression as a result of using visual literacy materials within the language experience approach to reading.
4. There will be increase in participants' positive attitudes toward reading.

Explanations of the hypotheses indicated the types of skills and attitudes which were expected to be developed

through the use of visual literacy materials and the language experience approach to reading.

The assumptions relating to this research project were presented. Basic procedures of the study were presented in the design of the study. A definition of terms concluded Chapter I.

In Chapter II a review of research and related literature is presented. The focus is on three areas of research and literature. The first area of related literature is that which pertains to oral language as it relates to reading. Literature containing information and research utilizing the language experience approach to reading is presented next. The third area of literature reviewed is visual literacy.

The findings of the pilot study are presented in Chapter III. Information on the selection of students and the procedure of this investigation are indicated. Finally Chapter III is concluded with a delineation of the design of the study.

The data compilations of this investigation are included in Chapter IV concurrent with analyses of data. The data collected consist of participants pre and post scores on: the California Reading Test and the Auburn Reading Attitude Survey. Samples of the participants' oral and written language based on wordless picture books and non-narrated films were also collected as pre and post measures.

Conclusions, a summary and recommendations for further research are presented in Chapter V.

CHAPTER II

REVIEW OF RESEARCH AND RELATED LITERATURE

This researcher has identified three basic areas of research and related literature which he deems relevant to this research study. These three areas are: (a) Oral language as it relates to reading, (b) the language experience approach to reading and (c) visual literacy in reading instruction and other areas of communication. Oral language is important to this study because oral language development is included as an important aspect of language development which provides a base for children's reading development. If a student is going to be able to develop his reading abilities to the fullest extent, he must develop understandings for many words, understandings for multiple meanings of words, abilities to use context and increased understandings of materials which are read on literal, inferential and critical levels. Through a firm base of oral language development increased understanding for words is made possible. Further, oral language development makes it feasible for students to hear and use the language which will be the primary focus of their reading instruction. This basis for reading instruction is based on experiences which children have had. Children tend to learn most when the materials

to be learned are related to what they already know, at a level of difficulty which is challenging but not frustrating and based on the development of those skills which each individual needs. Fluency in oral language ability and a wide range of experiences give the students a strong background for future learnings. Without these backgrounds to build on, concept development and understandings of ideas are seriously restricted.

The literature on the language experience approach to reading is important to this research because both the oral and written language of the participating students will serve as a basis for their reading materials. Further, the written form of participants' oral language and their written language will be used for their reading development. Visual literacy materials in the form of wordless picture books and non-narrated films were used as a basis for students' languaging and reading development. Thus, the student is dealing with pictures, a means of communication which has been and continues to be an elementary and important means of communication. These visual literacy materials make possible the fusing of cognitive, affective and psychomotor elements within the reading program.

Studies which relate to oral language and reading were included in this review. These studies were included because one of the focuses of this research project was oral language development as it relates to the language experience approach to reading.

The second area of research and related literature previewed was significant programs utilizing the language experience approach. This review was important in establishing a rationale for the use of the language experience as an element of this study.

Visual literacy research in reading instruction and other areas of communication and related literature is included in the final section of this chapter. The review of visual literacy materials was important to this study since wordless picture books and non-narrated films were to be used as a basis for participants oral and written language expression and their reading development.

Review of the Literature

Oral Language Research

Adequate development of oral language is important as a basis for development of reading abilities. Studies cited in this section of Chapter II support this important relationship between oral language and reading.

Two major studies which lend support to the close relationship between oral language and reading were conducted by Strickland and Loban.

Strickland²⁰ analyzed the oral language structure of students in grades one through six. Participants were

²⁰Ruth G. Strickland, "The Language of Elementary School Children: Its Relationship to the Language of Read-

selected randomly from 3,801 students in sixteen public schools. There were approximately one hundred students from each grade except fourth grade which had only about seventy-five students. Syntactic structures of sentences, frequency of occurrence of certain patterns of syntax, amounts and kinds of subordination, length of sentences, flow of language within the student's oral language were compared with that found in text books at each grade level. Texts were analyzed for occurrence of patterns used by children.

She concluded that (1) children at all grade levels used a wide range of language, (2) certain patterns which children use with great frequency appear to be basic building blocks and (3) students' oral language patterns are more varied than patterns found in basal readers even though some congruence between the two is desirable.

A major strength of Strickland's study was the analytical manner in which she systematically looked at the oral language used by children. A finding of Strickland's study which is particularly significant in relation to this research project was the varied oral language patterns of students as compared with the more limited language patterns used in the basal readers.

ing Textbooks and the Quality of Reading of Selected children," Bulletin of the School of Education, Indiana University, Vol. XXXVIII, No. 4, 1962.

Loban²¹ carried out a seven year longitudinal study of children's reading and writing. Three hundred thirty eight subjects were chosen from eleven kindergarten classes. Data were collected concerning (a) their vocabulary, (b) their use of oral and written language, (c) their proficiency in reading and listening, (d) teachers' judgments of their skill with language, (e) background information on their health and homes. The data was collected on these students through the sixth grade.

Loban concluded that students who are high in general language ability are also high in reading ability. Those who are low in general language ability are also low in reading ability. The gap between the high and the low groups is apparently widening from year to year.

An important aspect of Loban's investigation was that his study was a seven year longitudinal study of children's reading and writing with data collection on the three hundred thirty eight subjects from the start of first grade through the end of grade six. An implication based on Loban's study which is of particular value to the study of this researcher is Loban's conclusion that there is a high degree of positive correlation between students' oral language abilities and their reading abilities.

²¹Walter D. Loban, The Language of Elementary School Children, NCTE Research Report No. 1, National Council of Teachers of English, Champaign, Illinois, 1963.

A study Ruddell²² conducted relates to those completed by Strickland and Loban. Ruddell's investigation went a step further to determine the effect of oral and written language patterns on reading comprehension. Ruddell prepared six reading passages. Three of the passages consisted of language patterns which occurred with high frequency in children's oral language patterns. The remaining three passages were constructed by the use of language patterns which rarely occurred in children's oral language. The similarity of the oral and written language was derived by assigning the empirically determined frequency of the oral language patterns of fourth grade children to identical written patterns of language structure in a reading passage and totaling the assigned frequency values based on Strickland's data. Difficulty of sentences were equated by using the Dale-Chall readability formula. Cloze comprehension tests were constructed for each of the reading passages by deleting the fifth word from the beginning of each reading passage and every fifth running word. This comprehension test was administered to one hundred thirty-one of one hundred forty randomly selected fourth graders. Ruddell concluded that reading comprehension is a function of the similarity of patterns of struc-

²²Robert B. Ruddell, An Investigation of the Effects of Oral and Written Patterns of Language Structure on Reading Comprehension, Doctoral Dissertation, University of Indiana, 1963.

ture in reading material and the oral language structure used by children. Comprehension increased as the patterns of written language more closely resemble the oral language structure of the students.

A significant aspect of Ruddell's study was the systematic manner in which he constructed the reading passages. Ruddell's study was important to this investigation because of his conclusion that comprehension increases as the language patterns more closely parallel students' oral language patterns.

A study by Angelo²³ was designed to investigate oral language performance of fifty-four fourth grade students through analysis of sentence structures and functions. The difference between the language performance of the fifty-four fourth grade students, ten third grade students and ten fifth grade students was compared. Groups were equated on the basis of age, sex and intelligence. Parents' occupations were classified for the fourth grade students based on the Minnesota Scale for Paternal Occupations. This researcher questions Angelo's process of collecting oral language samples. Angelo indicates that students were encouraged to use an outline or notes on non-fictional material. These prepared outlines would tend to

²³Anthoney Richard Angelo, A Descriptive Study of the Oral Language Performance of Fourth Grade Children. A doctoral dissertation, Boston University School of Education, 1971.

make Angelo's study of oral language become clouded with aspects of written language thus making his study something other than merely a study of oral language. The language samples were tape recorded, transcribed and then analyzed. Hunt's T-Units were used to analyze the samples. An important finding of the study was that the fourth grade students whose parents were classed in the unskilled group used longer T-Units and had more T-Units containing less than nine words than did either of the fourth grade students whose parents were classed as professional or semi-professional. Angelo seems to overgeneralize when he indicates that there is minimal language accomplishment between grades three and four but much more growth in language performance of fifth grade students. Growth in language development was not the focus of his study. Had this been the intent it would have seemed logical to follow the same students through the third, fourth and fifth grades. The importance of Angelo's study to this researcher was the use of Hunt's T-Units in analysis of the language samples.

Cohen's²⁴ study focused on cognitive and affective involvement of students with a variety of vocabulary and experiences found in children's literature. Twenty second grade classes were divided between experimental and control groups. The exposure of the experimental group to selected

²⁴Dorothy H. Cohen, op. cit.

literature was designed to counteract inadequate oral language through the increase of students' vocabularies and improvement in reading.

Teachers in the experimental group read a selection each day from a collection of fifty books and these books were made available to the students. Tests used were a free association vocabulary test, and the Metropolitan Reading Achievement Test, Upper Primary level. The number of different words students used were counted and quality points were assigned each word according to its frequency rating for grade two in Rinsland's Basic Vocabulary of Elementary Children.

The findings were that the experimental group had an increase over the control group in vocabulary, word knowledge, and reading comprehension. Conclusions were that: reading to children from selected literature as a means to reading success was important to socially disadvantaged children, and there was substantiation of the relationship existing between oral language and reading. The importance of the relationship between oral language and reading related to this study since oral language was to be used as a basis for students' language development and their reading experiences.

A study which further strengthens the use of students' language as a basis for their reading material was

that of Packer.²⁵ Students' key vocabularies were compared with the vocabulary words in the basal texts of pre-primers and primers of four basal series. Packer concluded that there is a significant difference between vocabulary which is meaningful to culturally disadvantaged students and words which are included in basal readers.

A study to determine the effectiveness of using experience charts with twenty six first graders selected from a predominately black inner-urban, economically disadvantaged community was initiated by Brazziel and Terrell.²⁶ Experimental and control groups were used. At the conclusion of the six week program the researchers concluded that experience charts used in connection with other readiness activities provided meaningful reading. The experimental group scored higher on the Metropolitan Readiness test than did the control group. A major weakness of the Brazziel, Terrell study was the short term during which the study was conducted. The relevance of the study to that of this researcher was their use of the students' oral language as a means of developing reading materials for those students.

²⁵Athol Packer, "Ashton Warner's Key Vocabulary for Disadvantaged," The Reading Teacher, Vol. XXIII, No. 6 (March, 1970), pp. 559-564.

²⁶William F. Brazziel, and Marry Terrell, "For First Graders; A Good Start in School," Elementary School Journal. Vol. VIII (April, 1962), pp. 352-355.

Language Experience Research

No studies which utilized the language experience approach as a basis for the development of the reading abilities of students classed as remedial readers were identified by this researcher. However, studies which focus on the language experience approach as used in developmental reading programs have been identified. These studies and their findings have important implications which related to the study of this researcher because the language experience approach to reading begins with individual students at the point they are found in language development. It is important for all students that learning take place on a level commensurate with their abilities. This individualization is particularly needed for students in remedial reading programs.

Studies which are supportive of the language experience approach to teaching developmental reading are those by Allen, Stauffer, and Stauffer, and Hammond. Allen's²⁷ study compared three approaches to teaching reading; namely, basic reading approach, the individualized, and the language experience approach. The basic reading groups were to follow directions given in the teachers' supplementary texts. The students in the individualized approach group read books of their own choice with teachers providing skill

²⁷Allen and San Diego Public Schools, op. cit.

instruction as needed. The language experience approach groups concentrated on reading their written language for the duration of the study. Allen concluded that children in the language experience classrooms made as much or more progress in reading skill development as did the children in either the basic or individualized reading approaches.

An important component of Allen's study was the comparison of randomly selected students who participated in one of three approaches to reading. Allen's finding that children who participated in the language experience approach group made as much or more progress in reading skill development as did children in the other groups was important to this research study.

The purpose of Stauffer's study was to compare a language arts approach to beginning reading instruction with a basic reader approach for the same grade level. The oral language, writings, dictations and creative writings were used to teach reading. Word attack training was initiated from the beginning based on words from the children's spoken and written vocabulary. As soon as these children could read at the first grade level reading, time was divided equally between group instruction using basic readers and individualized reading using self-selection from a library.

²⁸Stauffer, op. cit.

The teachers of the control group were instructed to follow directions outlined in the teacher's manual of the reader series. Students of both groups received one hundred forty days of teaching. Stauffer concluded that:

1. The language arts group scored significantly higher on tests of word reading, paragraph meaning.
2. On word study skills and vocabulary tests students were equal.
3. The language arts approach produced good oral readers.
4. Pupils taught by the language arts approach are apt to have better word recognition skills.
5. The language arts approach is an effective way of teaching reading.

This researcher questioned Stauffer's placement of the language arts group as soon as they had reached grade level one with equal time spent on basal reading and individualized reading. This practice would tend to minimize the difference in the experiences of the experimental group and those of the control group. Further this overshadows Stauffer's conclusions by making his findings of lesser strength. Stauffer's finding that the language arts group scored significantly higher on a test of word reading and paragraph meaning is significant to the study of this researcher.

The Stauffer-Hammond²⁹ study was a follow-up study extending language arts and basal reader approaches into grade two. A variety of pretests were administered to randomly selected individuals. A different set of posttests were administered to these individuals. There were two hundred six subjects in the experimental group and one hundred eighty three in the control group. The only posttests given to all subjects in both groups were The Stanford Achievement Test, an Attitude Inventory and Reading Interest Scale. The researchers concluded that:

1. The language arts group was reading significantly better at the end of grade two than were students in the control group.
2. Language arts approach fosters greater interest in reading than does the basal reader.
3. Reading accuracy and rate of language arts group was greater than that of basal reader group.
4. Language arts fosters greater facility in word recognition than does the basal reader approach.
5. Both approaches are effective but the language arts approach is more effective.

²⁹Russell G. Stauffer and W. Dorsey Hammond, "The Effectiveness of the Language Arts and Basic Reader Approaches to First Grade Reading Instruction--Extended into the Second Grade," The Reading Teacher, Vol. XX, No. 8 (May, 1967), pp. 704-746.

A weakness in the Stauffer-Hammond study was the use of different sets of pre and post tests. Use of alternate forms of the same test set would have strengthened their study. The significance of the findings of the Stauffer-Hammond study was the support for the value of the language arts approach in strengthening word recognition and reading comprehension abilities of students. Of further importance to the study of this researcher was the conclusion of Stauffer and Hammond that the language arts approach fosters greater interest in reading than does the basal reader approach.

Studies which found no significant difference between language arts approaches to reading and other approaches were conducted by Kendrick and Hahn. Kendrick's³⁰ study compared four first grade classes using experimental and control groups. The experimental groups used the language arts approach. The control groups were taught by traditional methods using basal readers. The Stanford Achievement Test was given to measure reading growth. No significant difference was found to favor either group. Kendrick had similar findings on extending the study into second grade. The implications of Kendrick's study were that the language arts approach was of no lesser worth in teaching reading

³⁰William Kendrick, "A Comparative Study of Two First Grade Language Arts Programs," The Reading Teacher, Vol. XX, No. 1 (October, 1966), pp. 25-30.

than the traditional basal reader approach. Hahn's³¹ experimental study compared ita, language arts and basal reader approaches to reading.

Groups taught by ita used texts based on the instructional teaching alphabet, the language arts approach was based on children writing their own stories to read. The basal reading group followed instructions in the teacher manual. The Stanford Achievement test was administered and it was concluded that students taught by ita or language arts approach were significantly stronger on the Word reading subtest. No significant difference was found in comprehension. The implication of Hahn's study is that the language arts approach to reading was as valuable as ita or the basal reader approach.

Two studies which tend to support the use of the language experience approach are those of Giles and a study by Kendrick and Bennet. Giles³² investigated the oral language development of two first grade classes instructed by the language experience approach with two classes that used the basal approach. Conclusions were that the language

³¹H. T. Hahn, "Three Approaches to Beginning Reading Instruction: ITA, Language Arts and Basic Reader," The Reading Teacher, Vol. XIX, No. 8 (May, 1966), pp. 590-594.

³²Douglas E. Giles, The Effect of Two Approaches to Reading Instruction Upon the Oral Language Development of First Grade Pupils, Unpublished Doctoral Dissertation, North Texas State University, Denton, Texas, 1966.

experience children made greater gains in oral language than did the basal group. The advantage of the language experience approach was greatest for boys.

An important aspect of Giles' study was his comparison of the gains made in oral language by students participating in the language experience approach to reading and those participating in the basal reader approach. His findings that the language experience students made greater gains in oral language than did students in the basal reader group lends support to the investigation of this researcher for the hypothesis that there will be significant growth in participants oral language development.

Kendrik and Bennet³³ found that when they compared groups of second grade students using the language experience approach with those groups using the basal reader. The conclusions for total groups indicated no significant difference between the two groups in reading achievement. It was found that the lower socioeconomic boys who participated in the language experience approach achieved better than those in the basal groups. While Kendrick and Bennet found no significant differences between the groups which used the language experience approach and those which used the basal reader approach an important finding was that

³³William Kendrick, and Clayton, Bennet, "A Comparative Study of Two First Grade Language Arts Programs Extended Into Second Grade," The Reading Teacher, Vol. XX, No. 8 (May, 1967), pp. 747-755.

lower socioeconomic boys who participated in the language experience approach achieved better than those in the basal reader approach. This finding is particularly relevant to the study of this researcher since a significant portion of the remedial readers identified were boys.

A study which supports the use of audio-visual material in conjunction with the language experience approach was the CRAFT Project by Harris and Sewer.³⁴ These researchers used four groups:

1. A basal skill centered group which adhered closely to basal manuals.
2. A phono-visual method skill centered basal approach group.
3. A language experience approach group.
4. A language experience approach group with a strong supplemental audio-visual program.

Harris and Sewer added new dimensions to their project because they compared not only basal and language experience groups but also phono-visual and language experience with supportive use of audio-visuals. The reading achievement of the basal group was indicated as making slightly more progress than the other groups. The language experience group with supplemental audio-visual matched the skill

³⁴Albert J. Harris, and Blanche, Sewer, "Comparing Reading Approaches in First Grade Teaching with Culturally Disadvantaged Children," The Reading Teacher, Vol. XX, No. 8 (May, 1967), pp. 631-635.

centered group using phono-visual methods and exceeded the group using the language experience approach, alone. This finding supports the use of visuals as a part of this researcher's study.

The studies of Hall and Lamb relate the use of the language experience approach with disadvantaged students. Hall³⁵ investigated the language experience approach compared with basal approaches in a predominantly black community. There were five experimental groups and five control. At the conclusion of the study significant gains on reading readiness and word recognition on standardized tests were reported favoring the experimental group of language experience over the control. The language experience students also made the greater gains in sentence reading ability. Hall's study gives added support to the value of using the language experience approach particularly among students with language patterns which differ from the language patterns used in basal readers.

Lamb³⁶ utilized the language experience approach with five first grade classes in comparison with five

³⁵Mary Anne Hall, The Development and Evaluation of a Language Experience Approach to Reading with First Grade Culturally Disadvantaged Children, an unpublished doctoral dissertation, University of Maryland, 1965.

³⁶Pose Lamb, The Language Experience Approach to Teaching Beginning Reading to Culturally Disadvantaged Pupils. Final Project Report Office of Education, Department of Health, Education and Welfare, Washington, D. C. 1971.

control groups of students using basal readers. She found no significant differences between the experimental and control group in reading achievement and attitude as measured by the California Reading Test and the Primary Pupil Reading Attitude Inventory. The significance of Lamb's study was the use of the California Reading Test which is a standardized reading test identified for use as pre and post tests by this researcher.

The language experience approach to reading incorporates the major goals of reading which include developing interest in reading, extending vocabulary and promoting competencies in word analysis and insightful comprehension. Capitalizing on the uniqueness of each individual, the language experience approach begins where the student is in language development and extends this language development through relevant experiences.

This researcher has identified literature based on the language experience approach which is not research but is deemed important to such research. Hall³⁷ cites three categories of language information which all readers draw on in the processing of written information. The three categories are (1) information based on the writing and phonological structure or grapho-phonetic information,

³⁷Mary Anne Hall, An Effective Language Experience Approach, paper presented at the 17th annual convention of the International Reading Association, 1972.

(2) information based on the grammatical structures of language which is the syntactics of language and (3) information based on meaning and concepts with printed symbols known as the semantics of language.

These three processes are incorporated effectively in the development of students' reading abilities through the language experience approach. The child is a user of language³⁸ therefore reading and writing should be based in speaking. These acts should stem from children's interests and things they desire to talk about.

Quality of a student's written language will closely parallel the quality of his oral language.³⁹ Not only should students who lack skill in verbal abilities have many chances to express themselves orally but there should also be opportunities to transfer these expressions into reading and writing. This is indicated by Loban⁴⁰ and Suslakowski.⁴¹

³⁸Kenneth Goodman, "Reading, The Key Is The Children's Language," The Reading Teacher, Vol. XXV, No. 6 (March, 1972), pp. 505-508.

³⁹Alvina Burrows, Dorris Jackson, Dorothy Saunders, They All Want to Write. Written English in the Elementary School. (New York: Holt, Rinehart, Winston, 1974).

⁴⁰Walter Loban, "Oral Language and Earning," Oral Language and Reading, James Walden, Editor. (Urbana, Illinois: National Council of Teachers of English, 1969), pp. 101-112.

⁴¹Henry J. Suslakowski, "Some Contributions of Linguistic Science to the Teaching of Reading," Oral Language and Reading, James Walden, Editor. (Urbana, Illinois: National Council of Teachers of English, 1969), pp. 49-74.

Lee and Allen,⁴² Ashton-Warner,⁴³ and Stauffer,⁴⁴ have indicated the strength of the language experience approach in reaching children. Psychologically the language experience approach is effective because it is firmly rooted in familiar experiences. Linguistically it is a valuable approach to use because attention is on language as a means of communication rather than a focus centering on small segments of language which may be limited in scope of meaning because it lacks relation to the child's experiences.⁴⁵ In the language experience approach there is less need to ascertain the child's understanding of words since these words have emerged from his listening-speaking experiences.⁴⁶ Reed says most linguistics are in agreement that basal reader presentations of new vocabulary words have been too rigid and highly structured. They have made the process

⁴²Doris Lee and R. V. Allen, Learning to Read Through Experience (New York, Appleton Century Crofts, 1963).

⁴³Sylvia Ashton-Warner, Teacher (New York: Simon and Schuster, 1963).

⁴⁴Russell G. Stauffer, The Language Experience Approach to the Teaching of Reading (New York: Harper and Row, 1970).

⁴⁵Mary Anne Hall, The Language Experience Approach for the Culturally Disadvantaged, International Reading Association, Newark, Delaware, 1972.

⁴⁶Sam Shohen, "A Language Experience Approach to Reading Instruction," Views on Elementary Reading, Thomas Barret and Dale Johnson, Editors. International Reading Instruction, Newark, Delaware, 1973, pp. 43-48.

of attaining new words repetitious and boring.⁴⁷

According to Kress and Johnson,⁴⁸ children who share experience through oral language come to appreciate language and its many values. They learn to think and follow the thinking of others. Personal experiences are important sources for a child's language development. This finding was based on their personal observations of and associations with children.

Thorn⁴⁹ further supports the need for experiences to build a functional vocabulary. A classroom should provide an abundance of experiences. Vocabulary develops from ideas stemming from one's experiences. New ideas are particularly stimulating to communication. The teacher encourages discussion and provides new words as well as clarifying points of misunderstanding.

Allen⁵⁰ says that since the materials used in the language experience approach are closely related to the

⁴⁷David W. Reed, "Linguistics and Reading, Once More," Oral Language and Reading, edited by James Walden (Urbana, Illinois: National Council of Teachers of English, 1967), pp. 75-88.

⁴⁸Marjorie Johnson and Roy Kress, The Reading Teacher, Vol XXI, No. 7 (April, 1968), p. 610.

⁴⁹Elizabeth Thorn, "Language Experience Approach," The Reading Teacher, Vol XXII, No. 1 (October, 1965) p. 5.

⁵⁰R. V. Allen, "How a Language Experience Program Works," A Decade of Innovations: Approaches to Beginning Reading, IRA Convention Proceedings, Vol. XII, pt. 3 (Newark, Delaware: 1968), p. 5.

student's experiences the use of context clues is made simpler for him. The student's written language serves as a basis for teaching principles of phonics and word structure.

Vilscek⁵¹ indicates that instruction through the language experience approach should be systematic. Reasonable and appropriate goals for each individual should be established. Evaluation should be objective, continuous, and should serve as a basis for what is taught.

Visual Literacy Research

The use of visual media makes it possible for students to vicariously experience their world and to associate this experience with the storehouse of experiences which they have had. These visual experiences are strengthened as students talk and write about them. Free choice of reading is possible as students select stories to read from their own writing and dictations along with those of other students.

During the years since 1969 there has been increasing interest among educators in the use of visual literacy as it relates to education. To date there is a limited amount of related research based on visual literacy. A

⁵¹E. C. Vilscek, "What Research has Shown about the Language Experience Program" A Decade of Innovations: Approaches to beginning Reading, IRA Convention Proceedings, Vol. XII, pt. 3, Newark, Delaware, 1968, pp. 9-23.

study which was designed to assess the relationship of varying visuals on undergraduate student learning of medical concepts was one designed by Dwyer.⁵² He conducted a study comparing the presentation of information with no illustrations to that with varying degrees of illustrations: in black and white, abstract line illustrations in color, detailed shaded drawings in black and white, detailed shaded drawings in color, photograph of a heart model in black and white, photograph of heart model in color, realistic photographs in black and white, and realistic photographs in color. Students were given five tests: a drawing test, identification test, terminology test, comprehension test, and total criterion test. Dwyer concluded that: types of visual illustrations vary in their ability to promote student achievement, color is important in increasing learning for some students, effectiveness of a visual is determined in part by the time students are allowed to interact with it, a given type of visual may not be appropriate at all grade levels. Dwyer's design for his study was significant in contributing to an understanding of how gradation from no illustrations to realistic photographs in color effect understandings of concepts presented. Another strength of Dwyer's research was his thorough and carefully designed

⁵² Francis M. Dwyer, "Visual Learning--A Critical Analysis," Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Pitman Publishing Corporation, 1970), pp. 92-96.

testing program. Of particular relevance to the study of this researcher was the conclusion of Dwyer's study that illustrations promote the learning of concepts.

Substantiating Dwyer's study which highlighted the use of visuals for learning is a study carried out by Raven and Strubing⁵³ who found that training on directly related visual materials and training on indirectly related visual materials significantly improved learning on a science unit for second graders. The study by Raven and Strubing was valuable because it focused on the use of visuals to promote learning for early elementary students. Their findings have important implications for this researcher's study because of the indicated worth of visuals for concept development in early elementary education.

Studies designed to gain insight into the value of using pictures as a means to learn words were investigations by Deno and by Bouisseau, Davis and Yamamoto. Deno⁵⁴ used verbal and pictorial symbols in observing processes which undergird perception. He found that pictures used with undergraduate students generally are an aid to learning the verbal symbol that the picture represents. Deno's study was important because the conclusion based on it indicated

⁵³Ronald Raven and Herbert Strubing, "The Effect of Visual Perceptual Units on Achievement in a Science Unit: Aptitudinal and Substantive Transfer in Second Grade Children," American Educational Research Journal, Vol. III (May, 1968), pp. 333-342.

⁵⁴Deno, Op. cit.

an important connection between a visual or pictorial representation of a word and a graphic representation making up the word itself. Bourrisseau, Davis and Yamamoto,⁵⁵ sampled associations for verbal symbols, visual representations and combinations of the two as indicated by elementary school children. The reported findings were that visual representations were superior to verbal symbols in evoking specific, concrete responses. A greater number of sensory responses were elicited by the use of words alone. The implications of the study by Bourrisseau, Davis and Yamamoto support the concreteness of responses to pictures as compared with verbal symbols which elicit more abstract associations.

Anderson⁵⁶ investigated the presentation of statements which were presented in various media. These statements were equated in difficulty level and nature of content. It was evidenced that each media used stimulated different connotative meanings. Anderson's study had implications for the study of this researcher. It was expected that participants' verbal responses to wordless picture books will differ from their verbal responses to non-narrated films.

⁵⁵Bourrisseau, Davis and Yamamoto, op. cit.

⁵⁶James A. Anderson, "Equivalence of Meaning Among Statements Presented Through Various Media," Audio-visual Communications Review, Vol. XIV, No. 4 (Winter, 1966), pp. 499-505.

Studies by Strandberg and Griffith, and by LaPolt support the reinforcement of sequential learning through the use of visuals. Strandberg and Griffith⁵⁷ conducted a study with thirty children ages four and five years using pictures of their homes. An experimental group was given special training in visual sequential activities. A control group was used which did not receive training in visual sequential activities. The language measure of the experimental group was compared with that of the control group. Greater grammatical complexity in language was found in the experimental group when compared with the control group. They concluded that training in sequencing does have an effect on the length and complexity of the language a child uses to describe his pictures. The study by Strandberg and Griffith is supportive of the use of sequentially arranged pictures by this researcher to develop and strengthen students' uses of language.

An action research study which supports the use of visuals as a basis for students' writing is a study conducted by La Polt.⁵⁸ A select group of pupils that had just completed first and second grade were the subjects for an experiment in teaching visual and written sequencing. Four groups were set up. Group A used Photo Story Discovery

⁵⁷Strandberg and Griffith, op. cit.

⁵⁸La Polt, op. cit.

Sets to give practice in story arranging. The camera was introduced for them to photograph a sequence of events and tell a story. In group B each team had two or three students. The teacher outlined procedures for the groups to follow. Each team had to plan a story based on twelve pictures. Group C investigated the effect of photo sequencing on writing. Pupils wrote, then worked with Photo Story Discovery Sets. Finally students selected topics, shot pictures and organized. Group D was more unstructured than the other groups. As soon as students had planned their own stories they could take necessary pictures. La Polt concluded that when youngsters planned a story based on photos that they had taken themselves the happenings in those stories increased in number. These students' materials were not only more descriptive but there was also less difficulty with sentence and paragraph structure than students had previously experienced. This study was important because it adds to the findings of the value of visuals for language development. Further, use was made of these visual literacy materials to develop students' reading abilities based on their verbal abilities.

Two studies which utilized student-made media as a means of developing students' visual abilities and related verbal abilities are those of Fransecky, and

Fransecky and Ferguson. Fransecky⁵⁹ conducted a six week research demonstration project based on a migrant population of one hundred first, second and third grade students with fifty students in the experimental and fifty in the control group. The questions which the study sought answers for were: (1) Can a student use a camera to record and convey his environmental experiences? (2) Will a student's experiences in visual literacy help a student gain meaningful perception of the world around him? (3) Can experiences in visual literacy help students transfer from visual organization and recognition of visual patterns to more traditional verbal skills? The conclusion was that visual literacy was a valuable reinforcement to strengthen students' understandings of environments. The experimental group made significantly more progress in reading growth as measured by the Wide Range Achievement Test. This study was important because it adds to findings of the value of visuals for language development. Further, use was made of these visual literacy materials to develop students' reading abilities based on their visual and verbal abilities.

Fransecky and Ferguson⁶⁰ conducted a long term project entitled The Milford Visual Communications Project.

⁵⁹Roger B. Fransecky, Visual Literacy and Teaching Migrant Youth, Genesco Center for Migrant Studies, State University of New York, 1972.

⁶⁰Fransecky and Ferguson, op. cit.

This project involved students in grades K-12 in a series of visual and verbal language development experiences. The program consisted of five separate but interrelated phases. The following is an outline of those phases: (1) visual awareness and development of ability to communicate visual perception, (2) Dealing with more complex visual elements and communicating these ideas to others, (3) developing awareness of positive and negative effects of sound on visual information, (4) developing skill with the use of hardware used in producing visual literacy materials along with the awareness of potentials and limitations of these hardware and (5) refining and synthesizing visual/verbal skills which have been learned.

Findings indicated that: (1) the addition of visual literacy activities enhanced the classroom educational program by aiding students in the expansion and integration of their cognitive, visual and verbal abilities in a new and valuable way, (2) connections between language arts skills and those of visual literacy can serve to reinforce development of increased abilities in both areas of learning. Fransecky and Ferguson's study was carefully organized and systematically carried out over a long term which adds strength to the findings of their study. The implication which is relevant to the study of this researcher is the strength of visuals to reinforce verbal learning.

Research which seems to support the use of visuals for below average students is Gropper's⁶¹ investigation which was concerned first with visuals used to teach concepts either preceding or following a verbal lesson, secondly visual and verbal lessons were divided into small segments--each segment devoted to a few concepts. The learning material was programmed. There were two groups of students. One group of students were active performers; the others were passive observers. The lessons were basic science concepts. Gropper concluded that above average students seem to profit more from verbal presentations while below average students profit more from the visual presentation and responses to them. Gropper's finding that visuals are important elements in the process of teaching concepts to below average students is significant to the study of this researcher since this study will focus on remedial readers.

This researcher had identified relevant discussions about visual literacy. Visual and verbal parallels are directly related to this research in the use of visual literacy materials as a basis for oral and written language.

Debes states that it is his opinion that there are visual rhymes, visual puns, visual metaphors, and

⁶¹George L. Gropper, "Learning from Visual: Some Behavioral Consideration," AV Communication Review, Vol. XIV (Spring, 1966), pp. 37-69.

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possibly a visual counterpart for nearly every aspect of the verbal model.⁶²

Guerin⁶³ defines visual and verbal literacy as an extension of reality. The real object differs from the symbol. Verbal literacy is arbitrary and must be learned. The visual model offers cues to verbal meaning.

Dworkin's⁶⁴ opinion is that visual literacy demands as much intelligence and clarity of thought as does verbal literacy.

The types of visuals used may make a difference as to the message conveyed.

Kinder⁶⁵ suggests the following criteria be used in the selection of visuals. Authenticity of subject and simplicity of arrangement make possible clear understanding. Relative size comparable to a familiar object allows for a

⁶²John L. Debes, "The Loom of Visual Literacy--An Overview," Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Pitman Publishing Corporation, 1970), pp. 1-16.

⁶³David Guerin, "Extensionality and Symbology," Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Pitman Publishing Corporation, 1970), p. 56.

⁶⁴Martin S. Dworkin, "Towards an Image Curriculum: Some Questions and Cautions," Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Pitman Publishing Corporation, 1970), p. 130.

⁶⁵James S. Kinder, Using Audio Visual Materials in Education (New York: American Book Company, 1965), pp. 33-34.

means of understanding size of new objects. Action indicating scenes and artistry provide interest in visuals. Photography carefully considered and controlled maximizes the degree of meaning conveyed.

There are varying levels of ability in reading visuals. Brown, Lewis and Harclerod⁶⁶ suggests three levels; namely, recognizing and naming particular objects in the picture, determining and describing picture details and inferring past, present and future action in relation to the picture.

Williams⁶⁷ adds three more points: grasping importance of more points, adding imaginative elements, engaging in further activities related to the picture.

In support of the visual literacy movement it is indicated that we are moving to visual education based on unity and organization. We are increasingly aware of the effects and strengths of visual imagery. The outer world of visual reality and the inner world of the affective closely relate in the provision of a foundation for creative learning. As a person develops visual literacy skills his experiences become more meaningful.

⁶⁶Brown, Lewis and Harclerod, op. cit.

⁶⁷Catherine M. Williams, Learning from Pictures (Washington, D. C.: Department of Audiovisual Instruction, National Education Association, 1963).

One article by Geraci relates to visual and verbal development. Psychologists seem to agree that if there is a visual vocabulary it develops before the verbal. Children observe a sequence of visual events and are able to interpret it.⁶⁸

Regarding the use of visual literacy in the schools two opinions seem relevant. Culkin⁶⁹ says too often schools give up on students who have problems rather than using visual media to stimulate their learning. Motion pictures seem relevant to education because they deal with the affective and with experiences. The uses of films center around the projection of the film, discussions and analysis of it. Films make available many images perceived in uniquely differing ways by varying people. Students are native citizens to the new visual environment. The students which teachers meet with in the schools of this decade have had multi-faceted experiences. Therefore they need experiences involving many of the senses and integrating more of the various educational disciplines. Because of the large bulk of visual information which members of our society are confronted with daily through television, movies, magazines

⁶⁸John A. Geraci, "The Use of Photography Stimulates Visual Literacy," Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Pitman Publishing Corporation, 1970), pp. 237-239.

⁶⁹John M. Culkin, Films Deliver, Anthoney Schillaci and John M. Culkin, Editors (New York: Citation Press, 1970).

and advertisements, students need to be both visually and verbally literate.⁷⁰

Fillion,⁷¹ Sleuner,⁷² and Goldman and Burnett,⁷³ substantiate further the importance of developing students' abilities to deal with visual media. They indicate that our present day citizenry has as its primary source of information images and visual representations. Reading of visual messages is parallel in importance to reading a printed pattern of language symbols.

Lee⁷⁴ considers the following ideas as important in providing experiences for children:

1. Types of experiences provided should provide for both width and depth of associations within the child's environment.
2. Experiences should increase and intensify a child's perceptions of his world.
3. Provide opportunities for free choice of reading

⁷⁰Alexia Case-Grant, Visual Literacy an Exciting Environmental Adventure (Richmond Virginia: Virginia Public Schools, 1973).

⁷¹Bryant Fillion, "Visual Literacy," The Clearing House, Vol XLVII, No. 5 (January, 1973), pp. 309-311.

⁷²Fredrick Goldman and Linda Burnett, Need Johnny Read (Dayton, Ohio: Pflaum, 1971).

⁷³George Sleuner, "After the Book," The Future of Literacy, Robert Disch, Editor (Englewood Cliffs, New Jersey: Prentice Hall, Incorporated, 1973), pp. 145-159.

⁷⁴Lee, op. cit.

so that students can pursue their personal interests.

Möller⁷⁵ and Brown, Lewis and Harclerod⁷⁶ suggest that media should be included in the school curriculum in increasing roles because of its diversity and richness of content. Films can renew interest in learning for children who have become indifferent to learning. These same children can then turn with a sparked interest to written language for broader learning. As Barley and Ball⁷⁷ indicate visual media are among the best means of aiding students with low level verbal abilities with the learning process. Consider how models, illustrations, diagrams and pictures aid in simplifying understandings of concepts.

Barley⁷⁸ indicates that pictures arouse the recall of other sense awarenesses concurrent with the actual experiences that the pictures represent.

Gardner⁷⁹ purports that iconic messages, such as television, motion pictures, and still pictures generally

⁷⁵Möller, op. cit.

⁷⁶Brown, Lewis and Harclerod, op. cit.

⁷⁷Barley, Steven D. and Ball, Richard. The Elephants of Visual Literacy (Rochester, New York: Eastman Kodak Company, 1971).

⁷⁸Steven Barley, Why Visual Sequence Should Come First (Canandaigua, New York: Genessee Valley School Development Association, 1969).

⁷⁹Hugh C. Gardner, "Effective Classroom Communication," Audiovisual Instruction, Vol XVII (November, 1972), pp. 23-24.

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present a clearer understanding of a concept than do verbal descriptions. This is thought to be true because the iconic message looks like the concept it represents while words do not.

As a child begins to connect meaning with visuals in his environment he may more readily be able to associate meaning with word symbols and patterns with which he meets. This association is especially likely to occur as connections are made between the visual cues in the environment and the written symbols which represent the environmental cues.⁸⁰

Cianciolo⁸¹ recommends the use of wordless picture books to teach reading, visual literacy and to study language. Used within the language experience approach to reading wordless picture books can serve as a basis for student writing and reading. Many of the wordless picture books are valuable for literal interpretations while other examples such as Topsy Turvies: Pictures That Stretch The Imagination by Mitsumasa Anno deal with figurative expressions. Literary devices of point of view, mood, style and theme may be studied.

⁸⁰Steven Barley, A Visual Literacy Approach to Developmental and Remedial Reading (Rochester, New York: Eastman Kodak Company, June 2, 1969), a paper presented at the Fourth Annual Reading Conference, State of Wyoming.

⁸¹Cianciolo, op. cit.

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Groff⁸² attempts to refute Cianciolo's suggestions for the use of wordless picture books. Groff argues that our society is already too dependent on visual messages to the level of the reading of literature. Groff bases his argument on a number of factors as follows. While students have had lengthy experiences with television plots yet they are not superior readers. There is a distinct difference between the mental efforts required for reading literature and for "reading" visual. Affective responses required for each are different. There is no value served by wordless picture books that could not be served by picture story-books. There is danger in the support of certain educators for wordless picture books. This researcher believes that Groff has ignored a number of important ideas. The universal language of pictures from which people of all language backgrounds can bring meaning is not recognized by Groff. A basic question is whether the parallel between television plots and wordless picture book plots is justified. Do the television shows which children watch have a plot? The mental energy required for reading words or viewing pictures or visual media depends on the use a reader or viewer makes of the materials with which he is confronted. Groff fails to recognize the inter-relatedness of language skill development. Further he cites no evidence that children's stories

⁸⁴Groff, op. cit.

based on wordless picture books will tend to be uniform, impersonal and limited in number. Reading is suggested by Groff as being a difficult, painful and possibly insurmountable task.

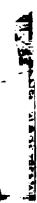
McLuhan⁸⁵ warns against the effects of visuals when based upon Joyce's writing he indicates that photos may have been a creation from nothing, or a substitution of shadows for real substance. It is further suggested by McLuhan that all media plays a role in our lives which leads to pseudo-perception and arbitrary value.

It is the view of this researcher that visuals are very much a part of today's culture and thus educators need to bring to student awareness the nature of visual representations so that students can deal effectively and critically with visual media.

Gropper⁸⁶ suggests that an effective teacher chooses visuals to which a child can easily respond. These visuals serve as a basis for responses. The types of visuals chosen were those which required responses and allow for practice. These visuals served as stimuli, as response cues or as feedback.

⁸⁵McLuhan, op. cit.

⁸⁶George L. Gropper, "Who is Visually Illiterate: The Student or the Teacher?" Proceedings of the First National Conference on Visual Literacy, Clarence M. Williams and John L. Debes, Editors (New York: Putnam Publishing Corporation, 1970), pp. 223-226.



For the evaluation of oral language based on visual media Monroe⁸⁷ designated five classification levels of students' oral language. These five levels are: (1) student doesn't respond or may make vary limited response, (2) student describes the action of some of the characters, (3) student indicates relationships between characters and objects, (4) student sees the picture as one part of a greater whole and (5) he discusses the picture in relation to the greater whole.

Summary

The focus of Chapter II has been directed to a review of research and literature related to this research investigation. Research and literature which was deemed relevant was that which concerned oral language as it relates to reading, language experience approach to reading and the visual literacy techniques.

Studies related to oral language and reading establish a strong relationship between oral language and reading. The difference in vocabularies of culturally disadvantaged and the lists of words presented in basal readers was indicated. It was indicated that students with high language ability usually are high in reading

⁸⁶Marion Monroe, "Necessary Preschool Experiences for Comprehending Reading," Reading and Inquiry (Newark, Delaware: International Reading Association Conference, 1965), pp. 45-56.

abilities. Word recognition and comprehension increases as reading passages more closely parallel language patterns which they utilize. Oral language through dictations and group stories can serve as an important base for student reading development. The findings of oral language research tend to support the use of oral language development by this researcher.

The emphasis of most studies which involved the language experience approach has been on its use in early primary reading instruction. No studies were identified which utilized the language experience approach beyond the primary grades or in remedial reading. Children who participated in language experience approaches to reading made greater gains or as great gains in word reading and comprehension. Audio visuals were indicated to be valuable components of the language experience approach. The inner relatedness of language skills is an important segment of the language experience approach. The studies cited tend to support the hypothesis of this study that students who participate in reading development through the language experience approach will improve reading skills.

The review of literature related to the language experience approach indicated the multi-faceted aspects of the language experience approach.

It was indicated that visual literacy has come to the forefront of education within the past decade. Because

of this recency of visual literacy research projects have been few in number. Studies conducted have been exploratory in nature. Visual media were indicated as important and integral educational processes in our media saturated society. Research tends to support the use of visual to develop verbal language and further reading abilities.

Related literature provided suggestions for the consideration of visuals for classroom use and the types of experiences which were deemed relevant to this use of visuals. A limited number of articles question the promotion of the use of visual if we are to develop a verbal society. Chapter III is delineated next. It includes a summary of the pilot study findings and information on the selection of students for the study. Procedures utilized in conducting the study are also presented.

CHAPTER III

SELECTION OF STUDENTS PROCEDURES AND DESIGN OF THE STUDY

This chapter contains a summary of the findings of the pilot study. The information on the identification of students, procedures and data of the pilot study is presented in Appendix A.

Approval to carry out the pilot study and the research study was secured from the principal of the target elementary schools the superintendent of the schools and the board of education. The school system selected for the pilot study and the research study was located in Columbia, a Middle Tennessee town with a population of approximately twenty thousand. The schools were made up equally of students from the rural area near Columbia and from Columbia itself.

Problems encountered in the conduct of the pilot study and changes implemented in this study are presented. The major portion of the chapter includes information on the identification of students and procedures utilized in the conduct of this study.

Summary of Pilot Study Findings

Total Reading Score

First Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in growth in reading significant at the .05 level of confidence when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. t was 5.92 with 8 degrees of freedom. The null hypothesis on total reading was rejected and the research hypothesis accepted above the .05 level.

Reading Vocabulary

First Sub Null Hypothesis

There will not be an increase in student vocabularies significant at the .05 level when visual literacy materials and the language experience approach to reading are used. t was 4.04 with 8 degrees of freedom. The null sub hypothesis on reading vocabulary was rejected and the research accepted above the .05 level of significance.

Reading Comprehension

Second Sub Null Hypothesis I

Students comprehension will not be increased at a significance level of .05 when visual literacy materials and the language experience approach to reading are used. t was a 5.14 with 8 degrees of freedom. The null sub hypothesis on reading comprehension was rejected and the research hypothesis accepted above the .05 level of significance.

Oral Language Hypothesis

Second Null Hypothesis

There will not be greater facility in oral expression significant at the .05 level as result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. t was less than 2.3 with 8 degrees of freedom. The null hypothesis was not rejected. There was no statistical difference between the pre and post number of total words used in oral language samples.

Written Language Hypothesis

Third Null Hypothesis

There will not be greater facility in written expression significant at the .05 level as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. t was less than 2.31 with 8 degrees of freedom. The null hypothesis H_3 was not rejected because none of the sub-hypotheses had t scores above 2.31 which was necessary for a significance level of .05 with 8 degrees of freedom.

Reading Attitude Hypothesis

Fourth Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in improvement of students' attitudes toward reading significant at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension. t was 2.07 with 8 degrees of freedom. The null hypothesis was not rejected. There was no significant difference between the pre and post reading attitude surveys.

Pilot Study Problems

1. One of the problems was in the time element. Classes were held for one hour each day. Within this time framework it was difficult for these students to get their mind set to writing. By the time students had watched a film a limited amount of time remained for the students to write.

2. This researcher found that the Upper Primary level of the California Reading Test which he used with the third grade students was too easy even for the remedial third grade students.

3. It was found that students had difficulty in remembering and sequencing ideas based on non-narrated films.

4. Many of the students were not only reluctant readers but also were reluctant writers. The primary writing background which the students came to reading class with was rote response to textbook questions.

Changes Implemented

1. The time element was one factor that this researcher had to live with because this time coincided with the time that the other students in a given class were in reading.

2. Because of the nature of the Upper Primary level of the California Reading Test this researcher found it necessary to concentrate on children classed as fourth grade remedial readers.

3. Students were encouraged to make brief notes while viewing non-narrated films. Through making notes it was felt that students would have a framework on which to build their stories when they were ready to write.

4. Students were given a variety of options through which they could provide oral stories on tape. These tapes were then transcribed by this researcher. Copies of the transcriptions were run off by this researcher. Students could dictate a story to this researcher or to another class member for writing. Group stories and plays could be planned by a group of students and written by one student or the teacher. At other times students wrote their own stories.

Research Project

Selection of Students

Students selected for the research project were from the same county school system as those selected for the pilot study. The superintendent and the board of education of Columbia, a Middle Tennessee town with a population of approximately twenty thousand had granted permis-

sion to conduct this project prior to the pilot study which was carried out during the fall semester of the 1973 school year. The population of the town was approximately ninety percent Caucasian with a ten percent Black population. The mean income per family was below \$4,000 per year. Thus many of the students within the school system came from economically disadvantaged homes.

Principals of target schools A and B were contacted during December, 1973 by this researcher to obtain their approval to conduct this research project within their schools. Approval was granted by both principals and arrangements were made for time slots and space allocation in which this researcher could work with the selected students.

The process of selecting students was basically the same as the process used to select students for the pilot study. In selecting students for the pilot study teachers of second, third and fourth grade classes in the target school listed names of third and fourth grade students to be tested for possible participation in the project. The teachers selected these students on the basis of students' test scores on the reading section of the Stanford achievement test taken during the previous school year and on teacher knowledge of student reading performance. The purpose of this initial selection was to delimit the unnecessary testing of all third and fourth

students. The primary difference between the two processes was indicated earlier in this chapter in the section on changes made. The focus was changed to fourth grade students rather than third and fourth grade students. This focus was necessary since the California Reading Test for upper primary students was found to be unsuitable for use in selecting remedial third grade readers who met the entrance requirements for this research project.

Fourth grade students who were in the middle and low reading groups at school A and B were tested for possible selection. To participate in this project students had to have an IQ score of 90 or higher and score at least one year or more below their grade expectance in reading vocabulary, reading comprehension, or total reading score on a pre reading test.

Level B of the multi-level edition of the Lorge Thorndike Intelligence Test was administered by this researcher to approximately sixty fourth grade students. The California Reading Test, Elementary Form W was administered to the same group of students by this researcher. This process of pre-testing for selection of students was conducted during the week of January 14 through January 18, 1974. Three students with IQ scores of close to ninety on the Lorge Thorndike Intelligence Test were admitted to the project on the performance of ninety or better on the

Weschler Intelligence Scale for Children which was administered by this researcher.

Twenty students who had IQ's of ninety or more and who were one year or more behind their grade expectancy in vocabulary, comprehension or total reading score as measured by the California Reading Test were selected for participation in this project. (1) The range in IQ's for the twenty students who were selected for this project was from 91 to 150. (2) The mean IQ was 105.3. (3) The range in grade expectancy scores was from 4.1 to 6.1 (4) The mean grade expectancy scores was 4.6.

The Bond and Tinker Expectancy Formula was used to determine the individual student's grade expectancy levels. Grade Expectancy scores for the Twenty students are listed. See Table 1.

TABLE 1
PARTICIPANTS' IQ's AND GRADE EXPECTANCY SCORES

Student Number	IQ	Grade Expectancy
1	91	4.1
2	97	4.3
3	98	4.2
4	100	4.4
5	100	4.4
6	99	4.4
7	100	4.4
8	119	5.1
9	98	4.3
10	108	4.7
11	95	4.1
12	115	4.9
13	107	4.6
14	150	6.1
15	115	4.9
16	92	5.0
17	120	5.2
18	108	4.7
19	101	4.4
20	102	4.5

Pre Reading Test

The following information can be derived from the twenty students' scores on the California Reading Test which was administered as a pretest; the range in reading vocabulary grade equivalency scores for the twenty participants was from 2.9 to 4.6. The range in reading comprehension grade equivalency scores was from 2.5 to 4.8. The range in total reading grade equivalency scores was from 2.7 to 4.5. The mean grade equivalency score in reading comprehension was 3.5. Four students were a year or more

behind their grade expectancy in vocabulary only. Six students were a year or more behind their grade expectancy in reading comprehension only. Ten students were a year or more behind their grade expectancy in total reading scores.

The scores on the pre test of the California Reading Test for the twenty students who participated in the reading project are listed in the following table, along with their grade expectancy scores figured through the Bond-Tinker Expectancy Formula.

TABLE 2
PARTICIPANTS' PRE READING TEST SCORES
AND GRADE EXPECTANCY SCORES

Student No.	Vocabulary	Comprehension	Total	Expectancy Score
1	2.9	4.0	3.6	4.1
2	2.8	3.6	3.3	4.3
3	3.8	2.7	3.2	4.3
4	3.4	3.5	3.5	4.4
5	4.6	3.4	4.1	4.4
6	3.4	4.3	3.9	4.4
7	2.9	3.6	3.4	4.4
8	4.0	4.3	4.1	5.1
9	3.9	2.5	3.2	4.3
10	3.8	3.4	3.6	4.7
11	4.0	3.2	3.5	4.2
12	4.2	3.5	3.5	4.9
13	4.0	3.2	3.8	4.6
14	4.1	4.8	3.6	6.1
15	2.6	2.8	4.5	4.9
16	4.4	3.5	2.7	5.0
17	4.6	4.2	4.1	5.2
18	4.2	3.7	4.5	4.8
19	4.8	3.2	4.1	4.4
20	2.2	3.2	3.9	4.5

The Procedures

This project was initiated on January 24, 1974 and continued through May 24, 1974. Classes were held five days a week for one hour each day during the second semester of the 1973-74 school year. Classes were scheduled during the times that the other fourth grade students were in their reading groups. Thus this project was the only reading program in which these students participated.

Students were administered the Auburn Reading Attitude Survey as a pre and post measure by this researcher. Oral and written samples by each student were taken at the start and the completion of the program. The students' oral samples were based on a wordless picture book which the student chose to tell a story about. Some of the titles of the wordless picture books used in this study include: Look What I Can Do! by Jose Arugo, A Cat Story by Eliot Gilbert, Shapes and Things by Tana Hoban, A Flying Saucer Full of Spaghetti by Fernando Krahm and Frog Where Are You? by Mercer Mayer. A complete list of all the wordless picture books used in this research project are included in Appendix B. Each student used the same book that he had chosen for his pre oral sample as a basis for his post oral sample. These oral samples were tape recorded by this researcher. The same non-narrated film

was used as a basis for all students' pre and post written samples. Some of the titles of the non-narrated films used in this study include: Friends, A Rock in the Road, Leaf, Solo and Chromaphobia. Titles for all of the non-narrated films used in this study are included in Appendix B.

Wordless picture books and non-narrated films were used throughout this project as a basis for students' visual experiences on which they based their oral and written samples. Select pictures from magazines were also used as a basis for oral and written samples. Copies of some of the magazine pictures used in this study are included in Appendix C. These oral and written stories were used as a basis for developing students' reading abilities.

Lists of words that individual students wanted to learn to use or spell correctly were listed on three by five note cards. Types of words which students kept on file cards were nouns and verbs from the stories that they wrote and read which were based on wordless picture books and non-narrated films. As help with words was needed by individual students in their reading or writing it was provided by this researcher or by other students within the class. This researcher provided spellings of any words which the students asked for.

Students were free to select wordless picture books or a picture which they could use as a basis for

writing or telling a story. Written stories were completed by individual students or two students sometimes worked together in composing a story. Students also wrote poems and plays based on the wordless picture books. Oral stories based on the wordless picture books were recorded on tapes, or dictated to this researcher or another student. Taped stories were transcribed by this researcher so that students could use the tapes and the stories transcribed from the tapes as a simultaneous means of developing their reading abilities. Students kept notebooks of their stories. Reading of these stories to this researcher, to another student or to oneself was an activity which students engaged in at least two days a week. Non-narrated films were shown to the students at least once a week. These films were briefly introduced by this researcher. Students took brief notes as they saw the film. These notes served as an aid to story organization when students were ready to write their individual stories at the conclusion of the film. After the films were viewed, words that might be used in writing the story were listed on the chalkboard as students suggested them. When students were ready to write they could select words from those listed on the chalkboard to use in their stories, or they could use other words.

Group stories were also written on select wordless picture books and non-narrated films. All students or a

a group of two or three students participated in these stories with this researcher or one student recording the story on the chalkboard or on paper. Typed copies of individual and group stories were made for students to keep in their reading notebooks.

Whenever necessary, this researcher edited students' stories since these stories were to be used as a basis for reading development by the total group of students within the reading project. Misspelled words were corrected and subject-verb changes were made to bring agreement. If a student had left a word out of a sentence a word was inserted by this researcher after consulting with the author(s) to make a complete sentence. The word to be inserted was determined by this researcher from the context of the story and by consulting with the author(s). Punctuation marks were placed as needed and words that needed to be capitalized were capitalized. The only changes made during the editing process were those changes which would clarify the meaning conveyed by each student's writings.

This project was designed in an effort to provide the remedial students with an alternative means of developing reading abilities without formal group instruction in word attack, word recognition or comprehension as an alternative plan. Experiences in individual stories and the stories of other students are familiar to students

since they have had vicarious experiences with the non-narrated films and the wordless picture books on which these stories are based.

Students who are found to be remedial readers generally have already participated in traditional type programs which emphasize phonics drills, structural analysis, dictionary work, comprehension questions and workbook activities as the primary focus of their reading experience background.

Design of the Study

The basic design of the study was a one group pretest-posttest type. The pretest consisted of Form W of the California Reading Test and the posttest was Form X of the same test. An individual's score on the total pretest and its sub-sections have been compared with his scores on the posttest and its sub-sections. The data was analyzed statistically using the t test to determine the level of significance of the difference between the pre and posttests.

Pre and post oral samples of each student were obtained. These samples were based on the same wordless picture book that each student chose for the pre oral sample. Tape recordings of these samples were made and this researcher transcribed and analyzed them comparing

total words, T Units, words per T Unit. The data was analyzed statistically using the t test to determine the level of significance of the difference between the pre and post oral language samples.

Pre and post written samples were obtained from each student. These samples were based on the same non-narrated film which was shown to all students pre and post. This researcher analyzed the students' written samples comparing total words, T Units, words per T Unit. The data was analyzed statistically using the t test to determine the level of significance of the difference between the pre and post written language samples.

The Auburn Reading Attitude Survey was administered as a pre and post measure. The individual student's scores and mean scores for the total group were computed. The data was analyzed statistically using the t test to determine the level of significance of the difference between student scores on the pre and post reading attitude survey.

Summary

A summary of the findings based on pilot study data was included at the start of Chapter II. Findings indicated that null Hypothesis 1 and the sub hypotheses based on the California Reading Test were rejected on the basis of t test scores which were above the 2.31 t score

necessary to reject the null hypotheses. Null Hypotheses 2, 3 and 4 relating to oral and written language and to reading attitude were not rejected by the findings of the pilot study.

Problems discovered in the pilot study were indicated. They were as follows: The time framework presented difficulties. The Upper Primary level of the California Reading Test was not a suitable measure for identifying third grade participants for this project. Students had difficulties in remembering and sequencing ideas from the non-narrated films. Many of the students were found to be reluctant writers. A number of changes were made. The time element could not be changed. Emphasis was focused on fourth grade remedial readers. Students were encouraged to make brief notes while viewing the films. Students were given a variety of options through which they could provide oral and written stories.

The chapter was concluded with a discussion of the procedures for selection of students for the research study, a description of the procedures used in the research study and a delineation of the design of the study. Chapter IV is presented next and contains the data collected for each aspect of the research study.

CHAPTER IV

PRESENTATION AND ANALYSIS OF THE DATA

This chapter will include an analysis of the research data compilations which were derived from scores on the California Reading Test, pre and post oral and written samples, and scores on the Auburn Reading Attitude Survey. An analysis of six students' individual scores on each measure as compared with the mean of the group is indicated. Where appropriate and in order to analyze the data the research hypotheses have been restated as null hypotheses.

The California Reading Test was administered in alternate form as a pre and post test. The discussion of the students' performance on the California Reading test will focus on students' scores on the pre and post subsections of vocabulary and comprehension and the total test score.

The same form of the Auburn Reading Attitude Scale was given as a pre and post survey of student attitudes. A comparison of students' pre and post scores on the attitude scale was made.

Pre and post oral language samples based on a wordless picture book were taped and transcribed by this

researcher. These samples were analyzed using total words, T Units, and words per T Unit for a comparison of the pre and post samples.

Pre and post written language samples were written by the students. These written samples were based on a non-narrated film. These written samples were analyzed on the basis of total words, T Units, and words per T Units in pre and post samples.

Presentation and Analysis of The Data Compilation

The data compilation consists of scores on a pre and post administration of the California Reading Test, a pre and post administration of the Auburn Reading Attitude Scale, a pre and post sample and analysis of the students' written language, and a pre and post sample of the students' oral language. The pre and post written language samples were based on a non-narrated film entitled The Little Blue Apron. The same film was used for pre and post so that conditions present for the post sample would parallel those for the presample. The pre and post oral language samples were based on a wordless picture book which each student selected to dictate a story. For the post oral sample each student used the same book which he had selected for his oral sample in an attempt to bring about close similarities between the pre and post language

sample. The students' oral samples were recorded on tapes. These taped stories were transcribed into written form by this researcher so that these samples could be analyzed.

The Reading Test

The California Reading Test, Elementary Form W was administered during the week of January 14, 1974 as a pretest for selection of students. This researcher administered the tests. The purpose of using the California Reading Test was to employ a standardized reading assessment of students' reading vocabularies, comprehension and total reading scores in pre and post comparison of students' reading abilities as measured by this test. During the week of May 2, 1974 the posttest Form X was administered.

The following information was derived from the comparison of pre and post grade equivalency scores on the reading tests. Three students had decreasing vocabulary grade equivalency scores of -1.3, -.6, and -.3 years. Three students had no change in reading vocabulary grade equivalency scores. One student had an increase of .3 year in reading vocabulary grade equivalency score. Thirteen students had an increase in reading vocabulary grade equivalency score of at least one or more months per month of participation in the program. Four students had decreasing reading comprehension grade equivalency scores

of .5 or less in comprehension. The mean gain in reading vocabulary grade equivalency scores for the twenty students was .7 of a year. One student had no change in his reading comprehension grade equivalency score. Two students had slight increases in reading comprehension grade equivalency scores of .2 year or less. Thirteen students had increases in reading comprehension grade equivalency scores of at least one or more months per month of participation in the program. The mean increase in reading comprehension grade equivalency score for the twenty students was .6 of a year. Two students had decreases in total reading grade equivalency scores of -.4. Three students had slight increases in total reading grade equivalency scores of from +.1 to -.2. Fifteen students had gains in total reading grade equivalency scores of at least one or more months per month of participation in the program. The mean increase in total reading grade equivalency scores was .6 of a year. Students who had decreasing scores in vocabulary and/or comprehension made less effort to learn new words. Their writings were minimal. Their basic attitude towards the research study and school in general was negative.

The California Reading Test is designed to test a student's vocabulary abilities in mathematics, science, social studies and general language abilities through having the student match word opposites from each of these areas.

The comprehension section is designed to assess a student's ability to follow directions, to deal with references, and to comprehend brief paragraphs read.

The following table is a presentation of the participating students' pre and post grade equivalency scores on the California Reading Tests. The purpose of this table is to provide the reader with a synopsis of change for participants in grade equivalence scores rather than statistically analyzing scores. A table which follows presents a statistical analysis using the t test.

TABLE 3
READING GRADE EQUIVALENCY SCORES

Student Number	Vocabulary			Comprehension			Total		
	Pre	Post	Gain	Pre	Post	Gain	Pre	Post	Gain
1	2.9	4.6	+1.7	4.0	3.5	- .5	3.6	4.2	+ .6
2	2.8	3.5	+ .7	3.6	3.4	- .2	3.3	3.4	+ .1
3	3.8	3.2	- .6	2.7	3.6	+ .9	3.5	3.6	+ .1
4	3.4	5.2	+1.8	3.5	3.7	+ .2	3.5	4.6	+1.1
5	4.6	5.5	+ .9	3.4	4.2	+ .8	4.1	5.0	+ .9
6	3.4	4.5	+1.1	4.3	5.1	+ .8	3.9	4.8	+ .9
7	2.9	4.6	+1.7	3.6	4.3	+ .7	3.4	4.5	+ .9
8	4.0	5.1	+1.1	4.3	4.8	+ .5	4.1	5.0	+ .9
9	3.9	3.9	0.0	2.5	4.0	+1.5	3.2	4.0	+ .8
10	3.8	3.8	0.0	3.4	4.1	+ .7	3.6	4.1	+ .5
11	4.0	3.7	- .3	3.2	2.8	- .4	3.6	3.2	+ .4
12	4.2	4.2	0.0	3.5	4.0	+ .5	3.8	4.2	+ .4
13	4.0	4.1	+ .1	3.2	4.1	+ .9	3.6	4.2	+ .6
14	4.1	5.0	+ .9	4.8	5.7	+ .9	4.5	5.4	+ .9
15	2.6	3.8	+1.8	2.8	4.2	+1.4	2.7	4.1	+1.4
16	4.4	4.6	+ .2	3.5	4.3	+ .8	4.1	4.6	+ .5
17	4.6	3.3	-1.3	4.2	4.1	- .1	4.5	4.1	- .4
18	4.2	4.9	+ .7	3.7	3.7	.0	4.1	4.3	+ .2
19	4.8	5.1	+ .3	3.2	5.1	+ .9	3.9	5.1	+1.2
20	2.2	3.6	+1.4	3.2	3.3	+ .1	2.7	3.5	+ .8

Analysis of the Research Project Data

A Hewlett Packard 65 hand calculator was used to calculate the means of the pre and post tests and samples, the standard deviation of the means, standard deviation of the difference between the means, standard error of the means, covariance, correlation coefficient, and t scores.

Total Reading Score

First Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in growth in reading significant at the .05 level of confidence when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Total Reading Test

The mean score on the total California Reading pretest was 40.35. The standard deviation was 9.37. The standard error was 2.09. The mean score on the posttest was 51.2. The standard deviation was 12.18. The standard error was 2.72. The covariance was 65.51. The correlation was .57. The standard error of the difference between the means was 2.29. t was 4.73 with 19 degrees of

freedom. This score was above the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was rejected above the .05 level of significance. Its research hypothesis was accepted based on the findings of this research study. See Table 4 on page 95.

Six students were selected for individual comparisons to the group. These students were selected from the total group using a random stratified sampling. The first student was drawn at random. Every third student was then selected. Results of these six students' pre and post scores with standard deviation from the pre and post means are reported for each aspect of the California Reading Test, the Oral Language Sample, the written sample and the Auburn Reading Attitude survey.

For the six students the change in standard deviation from the pre and post means it can be observed that:

- (1) three students had no change in standard deviation,
- (2) two students increased scores by one standard deviation
- and (3) one student lost one standard deviation.

TABLE 4
TOTAL READING SCORES

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	39	34	32	36	47	45	35	50	30	39
Post	47	35	36	57	65	63	56	66	46	46
Change	+8	+1	+4	+21	+18	+18	+21	+16	+16	+7

Student Number	11	12	13	14	15	16	17	18	19	20
Pre	38	44	38	57	23	48	56	47	45	24
Post	32	49	50	74	48	56	41	52	70	35
Change	-6	+5	+12	+17	+25	+8	-15	+5	+25	+11

Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre 40.35	9.37	2.09	65.51	.57	2.29	4.73
Post 12.18	2.72					
Change						

TABLE 5
SIX STUDENTS' TOTAL READING SCORES

Student No.	Pre Test Score	SD Form Mean	Post Test	SD Form Mean
7	35	-1	56	+1
10	39	-1	46	-1
13	38	-1	50	-1
16	48	+1	56	+1
19	45	+1	70	+2
2	34	-1	35	-2

Note: Pre Test Mean 40.35 Post Test Mean 51.2

Reading Vocabulary

First Sub Null Hypothesis

There will not be an increase in student vocabularies significant at the .05 level when visual literacy materials and the language experience approach to reading are used.

The mean score on the vocabulary section of the California Reading pretest was 17.8. The standard deviation was 6.16. The standard error was 1.38. The mean score on the posttest was 22.75. The standard deviation was 62. The standard error was 1.48. The covariance was +14.26. The correlation coefficient was .35. The standard error of the difference between the means was 1.63. t was calculated at 3.03 with 19 degrees of freedom. This score was above the t score of 2.09 necessary to reject

the null hypothesis. The null hypothesis was rejected above the .05 level of significance. The research hypothesis was accepted based on the findings of this research study. See Table 6 on page 98.

Based on the analysis of the six students' scores it can be noted that: (1) three students had the same standard deviation from the pre and post means, (2) one student gained one standard deviation and (3) two students lost one standard deviation.

Second Sub Null Hypothesis

Students' comprehension will not be increased at a significance level of .05 when visual literacy materials and the language experience approach to reading are used.

The mean score on the comprehension sub section of the California Reading pre test was 22.55. The standard deviation was 6.38. The standard error was 1.426. The standard deviation was 7.31. The standard error was 1.63. The covariance was +21.66. The correlation was +.47. t was 3.73 with 19 degrees of freedom. This score was above the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was rejected above the .05 level of significance. The research hypothesis was accepted based on the findings of this research study. See Table 8 on page 100.

TABLE 6

READING VOCABULARY

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	11	10	18	14	26	14	11	20	19	18
Post	25	15	13	32	34	24	25	31	19	18
Change	+14	+5	-5	+18	+8	+10	+14	+11	0	0
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	20	22	20	21	8	24	25	22	27	6
Post	17	22	21	29	17	25	13	28	31	16
Change	-3	0	+1	+8	+9	+1	-12	+6	+14	+10
Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t				
Pre	17.8	6.16	1.378	14.26	+ .35	1.63	3.03			
Post	22.75	6.62								
Change										

TABLE 7
SIX STUDENTS' READING VOCABULARY

Student No.	Pre Score	Pre SD From Mean	Post Score	Post SD From Mean
7	110	-1	25	+ 1
10	18	+1	18	- 1
13	20	+1	21	- 1
16	24	+1	25	+ 1
19	27	+1	31	+ 1
2	10	-2	15	- 2

Note: Pre Test Mean 17.8 Post Test Mean 22.75

TABLE 9
SIX STUDENTS' COMPREHENSION

Student No.	Pre Score	SD From Mean	Post Score	SD From Mean
7	24	+1	31	+1
10	21	-1	28	-1
13	18	-1	29	+1
16	24	+1	31	+1
19	18	-1	39	+1
2	24	+1	20	-2

Note: Pre Mean 22.55 Post Mean 28.50

Based on the analysis of the six students' scores on the comprehension section of the California Reading Test, it can be noted that three students had the same standard deviation from the pre and post means. One student lost three standard deviations. Two students gained two stan-

TABLE 8
READING COMPREHENSION

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	28	24	14	22	21	31	24	30	11	21
Post	22	20	23	25	31	39	31	35	27	28
Change	-6	-4	+9	+3	+10	+8	+7	+5	+16	+7
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	18	22	18	36	15	24	31	25	18	18
Post	15	27	29	45	31	31	29	24	39	19
Change	-3	+5	+11	+9	+16	+7	-2	-1	+21	+9
Mean	22.55	6.38	1.48	21.66	+ .47	1.59	3.73			
Standard Deviation	28.50	7.31	1.63							
Standard Error	5.95									

dard deviations from the pre and post test means. See Table 9.

The Pre and Post Oral Samples

Oral samples based on wordless picture books were dictated by each student. These stories were tape recorded. Each student selected the wordless picture book from this researcher's collection for his pre oral sample. This same book was used for the student's post oral sample. The recorded oral samples were transcribed into writing by this researcher. These transcribed samples were then analyzed using procedures parallel to those used for analysis of the written sample. The data comparing the pre and post oral samples consists of T Units, words per T Unit and total number of words. Table 8, on page 100 contains the data on the pre and post oral samples.

Oral Sample Analysis

The Kellogg-Hunt T Unit was used to obtain data on students' transcribed oral samples. The students pre and post oral samples were analyzed in terms of total words, T Units and words per T Unit. The oral samples were based on a pre and post oral language sample concerning a wordless picture book which a student chose to talk about. Each student's post oral language sample was based on the

same wordless picture book which he had chosen for the pre-test.

Oral Language Hypothesis

Second Null Hypothesis

There will not be greater facility in oral expression significant at the .05 level as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Oral Language Total

The mean number of total words used in the pre oral language sample was 266. The standard deviation was 221.903. The mean number of total words used in the post oral language sample was 651.75. The standard deviation was 576.46. The standard error was 128.90. The covariance was 731.39. The correlation was .572. The standard error of the difference between the means was 108.45. t was 3.56 with 19 degrees of freedom. This score was above the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was rejected above the .05 level of significance. The research hypothesis was accepted based

on the findings of this research project. See Table 10 on page 104.

All six students had considerable gains in total words. However, four students had no change in standard deviation from the pre and post test means. One student had an increase of two standard deviations and one student had a loss of one standard deviation. All except one student had large increases in total words. The mean of the post test was increased over the mean of the pretest so much that there was little change in each student's position. See Table 11.

TABLE 11
SIX STUDENTS' ORAL LANGUAGE

Student No.	Pre	SD From Mean	Post	SD From Mean
7	112	-1	301	-1
10	177	-1	455	-1
13	978	+4	1807	+3
16	235	-1	947	+1
19	150	-1	247	-1
2	169	-1	166	-1

Note: Pre Sample Mean 266 Post Mean 651.75

The following information can be derived from the table of A Comparison of Students Pre and Post Transcribed Oral Samples: (1) four students had slight increases of from +2 to +5 T Units, (2) thirteen students had large in-

TABLE 10
ORAL LANGUAGE TOTAL WORDS

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	135	169	58	179	200	452	112	136	406	177
Post	167	166	432	204	216	428	301	235	654	455
Change	+32	-3	+374	+125	+16	-34	+189	+99	+248	+278
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	105	321	978	121	112	235	488	586	150	200
Post	1166	365	1807	1452	80	947	2089	780	247	844
Change	+1061	+44	+829+1331	-32	+712+1601	+194	+97	+644		

creases of +12 to +194 T Units, (3) two students had slight decreases of -4 and -7 T Units and (4) one student had a large decrease of -29 T Units. The mean increase in T Units was 45.1. One student had a slight increase of less than twenty words (+16). Sixteen students had increases of +25 to +1601 total words. One student had a slight decrease of -3 in total words. Two students had large decreases (-24 and -32) in total words. The mean increase in total words was 385.9 words. The mean decrease in words per T Unit was -.07 words per T Unit.

Oral Language T Units

The mean number of T Units used in the pre oral language sample was 40.55. The standard deviation was 35.29. The standard error was 7.89. The mean number of T Units used in the post oral language samples was 86.55. The standard deviation was 76.27. The standard error was 17.053. The covariance was 1703.21. The correlation was .63. The standard error of the difference between the means was 13.5. t was 3.41 with 19 degrees of freedom. See Table 12 on page 106.

Report of Six Students' Oral Language T Units

Four of the six students had no change in standard deviation from the mean of the pretest to the mean of the

TABLE 12
ORAL LANGUAGE T UNITS

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	20	24	12	24	25	69	16	17	59	26
Post	22	20	72	26	30	59	35	29	82	61
Change	+2	+4	+60	+2	+5	+10	+19	+12	+13	+35
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	19	46	160	19	30	37	76	84	18	30
Post	128	65	262	191	23	102	270	86	31	137
Change	+109	+19	+102	+172	-7	+65	+194	+2	+13	+107
Mean	40.55	35.29	7.89	1703.21	.63	13.52	3.40			
Standard Deviation	76.27	17.05								
Standard Error										
Covariance										
Correlation										
Standard Error of Difference Between the Means										
t										
Pre	40.55	35.29	7.89	1703.21	.63	13.52	3.40			
Post	86.55	76.27	17.05							
Change										

posttest. One student had an increase of two standard deviations. One student had a decrease of one standard deviation. See Table 13.

TABLE 13
SIX STUDENTS' ORAL LANGUAGE T UNITS

Student No.	Pre Score	SD From Mean	Post Score	SD From Mean
7	16	-1	35	-1
10	26	-1	61	-1
13	160	+3	262	+2
16	37	-1	102	+1
19	18	-1	31	-1
2	24	-1	20	-1

Note: Pre Test Mean 40.55 Post Test Mean 86.55

Oral Language Words Per T Unit

The mean number of words per T Unit used in the pre oral language samples was 6.37. The standard deviation was 1.02. The standard error was .23. The mean number of words per T Unit used in the post oral language sample was 7.44. The standard deviation was 1.36. The standard error was .31. The covariance was .744. The correlation was .54. The standard error of the difference between the means was .27. t score was 4.04 with 19 degrees of freedom. See Table 14 on page 108.

For the six students the following observations can be made: (1) four students had no change in standard

TABLE 14
ORAL LANGUAGE WORDS PER T UNIT

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	6.8	7.0	4.8	7.5	5.0	6.5	7.0	6.2	6.8	6.8
Post	7.6	8.3	6.0	7.7	7.2	7.3	8.6	8.1	7.9	7.5
Change	+ .8	+1.3	+1.2	+ .2	+2.2	+ .8	+1.6	+1.9	+1.1	+ .7
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	5.5	7.0	6.1	6.4	3.7	6.4	6.0	6.9	8.3	6.7
Change	+3.6	-1.4	+ .7	+1.2	- .3	+1.8	+1.7	+2.1	- .3	- .5
Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t				
Pre	6.37	1.016	.227	+ .74	.54	.27	4.04			
Post	7.44	1.364	.305							
Change	1.11									

deviation from pre and post means, (2) one student had an increase of one standard deviation and (3) one student had a decrease of one standard deviation. See Table 15.

TABLE 15

Student No.	Pre Score	SD From Mean	Post Score	SD From Mean
7	7.0	+1	8.6	+1
10	6.8	+1	7.5	+1
13	6.1	-1	6.8	-1
16	6.4	+1	9.2	+2
19	8.3	+2	8.0	+2
2	7.0	+1	8.3	+1

Note: Pre Score Mean 6.37 Post Score Mean 7.44

Written Sample Analysis

Each student wrote a story based on the BFA film The Little Blue Apron as pre and post measures of students' written fluency. These samples were analyzed using the T Unit.⁸⁸ The T Unit is defined in the sub-section of Definitions of Terms in Chapter I of this investigation as minimal terminal units which are grammatically capable of being terminated with a capital letter and a period. This measure is similar to simple sentences. The concept differs

⁸⁸Hunt, Kellogg W., Grammatical Structures Written at Three Grade Levels (Champaign, Illinois: National Council of Teachers of English, 1965).

from sentences because the compound and complex sentences are broken up. Run on sentences are also separated. The following sentences contain examples of T Units which are indicated by slash marks:

1. The captain said/if we will follow his strategies, / we will win the game.
2. James bought a gift/and he went to the party.
3. I will give a prize to the one/that can do this trick.

Each student's written samples were analyzed by this researchers. The student's sentences were marked off into T Units. The number of T Units and words per T Unit were tabulated as were the total words.

The following information was derived from the written samples. Only one student had no change in T Units. Thirteen students had increases of 6 or more T Units. The mean increase in T Units was 10.4. All students had an increase in total words. Four students had increases of less than 20 words. Sixteen students had large increases of 30 words or more. The mean increase in total words for the twenty student was 80 words. Twelve students had slight increases in words per T Unit. These changes ranged from +.5 words to +2.7 words. Eight students had slight decreases in words per T Unit of from .7 to 4.2. Sixteen students had slight increases in words per T Unit from .2 to 3.6. Four students had slight decreases in

words per T Unit (-.3 to -1.4). The mean increase in words per T Unit was 1.1 words per T Unit.

Facility in Written Expression

Third Null Hypothesis

There will not be greater facility in written expression significant at the .05 level as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Written Total Words

The mean number of words on the pre written language sample was 62.5. The standard deviation was 30.19. The standard error was 6.75. The mean number of words on the post sample was 142.5. The standard deviation was 84.24. The standard error was 18.84. The covariance was 1482.58. The correlation was .58. The standard error of the difference between the means was 15.88. t score was 5.04 with 19 degrees of freedom. This score was above the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was rejected above the .05 level of significance. The research hypothesis was

TABLE 16
WRITTEN LANGUAGE TOTAL WORDS

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	32	21	61	40	93	45	64	61	63	55
Post	103	32	101	147	101	76	75	123	206	90
Change	+71	+11	+40	+107	+8	+31	+11	+62	+143	+35
Student Number	11	12	13	14	15	16	17	18	19	20
Pre	60	49	35	85	80	37	58	44	134	133
Post	123	98	72	98	328	181	244	110	194	348
Change	+63	+49	+37	+13	+248	+144	+186	+66	+60	+215
Mean	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
Standard Deviation	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
Standard Error	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
Covariance	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
Correlation	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
Standard Error of Difference Between the Means	62.5	30.19	6.75	1482.58	+58	15.88	5.04			
t	62.5	30.19	6.75	1482.58	+58	15.88	5.04			

accepted on the basis of the findings of this research project. See Table 16 on page 112.

From the analysis of the six students' scores it was found that two students had no change in standard deviation from the mean of the pretest to the mean of the post-test. One student gained two standard deviations, one student lost one standard deviation and two students lost two standard deviations. See Table 17.

TABLE 17
SIX STUDENTS' WRITTEN LANGUAGE TOTAL WORDS

Student No.	Pre Score	SD From Mean	Post Score	SD From Mean
7	64	+1	75	-1
10	55	-1	90	-1
13	35	-1	72	-1
16	37	-1	181	+1
19	134	+3	194	+1
2	21	-3	32	-2

Note: Pre Test Mean 62.5 Post Test Mean 142.5

Written Language T Units

The mean number of T Units used in pre written samples was 9.5. The standard deviation was 4.97. The standard deviation was 1.11. The mean number of T Units used in post written samples was 20.1. The standard deviation was 12.46. The standard error was 2.786. The covariance was 35.26. The correlation was .57. The stan-

dard error of the difference between the means was 2.34. t was 4.53 with 19 degrees of freedom. See Table 18 on page 115.

Six Students' Performance T Units

Three students had no change in pre and post standard deviation from the means. One student lost one standard deviation. One student gained one standard deviation. See Table 19.

TABLE 19

SIX STUDENTS' WRITTEN LANGUAGE T UNITS

Student No.	Pre	SD From Mean	Post	SD From Mean
7	10	+1	11	-1
10	7	-1	13	-1
13	6	-1	11	-1
16	7	-1	29	+1
19	15	+2	26	+1
2	4	-2	7	-2

Note: Pre Sample Mean 9.5 Post Mean 26.1

Written Language Words Per T Unit

The mean number of words per T Unit used in the pre written language sample was 7.14. The standard deviation was 1.99. The standard error was .44. The mean number of words per T Unit used in the post written sample was

7.04. The standard deviation was .99. The standard error was .22. Covariance was .82. The correlation was .42. The standard error of the difference between the means was .41. t was .26 with 19 degrees of freedom. This score was below the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was not rejected at the .05 level of significance. There was no significant difference between the pre and post words per T Unit used in the written language samples. See Table 20 on page 117.

From the analysis of six students it was found that three students had the same standard deviation from the mean of the pretest as that of the posttest. One student gained one standard deviation. One student lost one standard deviation and one student lost two standard deviations. See Table 21.

TABLE 21
SIX STUDENTS' WRITTEN WORDS PER T UNIT

Student No.	Pre Score	SD From Mean	Post Score	SD From Mean
7	6.4	-1	6.8	-1
10	7.9	+1	6.9	-1
13	5.8	-1	6.5	-1
16	5.1	-2	6.2	-1
19	8.9	+1	7.4	+1
2	5.2	-1	4.5	-2

Note: Pre Mean 7.14

Post Mean 7.04

TABLE 20
WRITTEN LANGUAGE WORDS PER T

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	8.0	5.2	5.5	5.0	6.2	7.5	6.4	5.5	8.0	7.9
Post	8.6	4.5	6.7	7.7	6.7	6.3	6.8	6.8	6.8	6.9
Change	+ .6	- .7	+1.2	+2.7	+ .5	-1.2	+ .4	+1.3	-1.2	+1.0

Student Number	11	12	13	14	15	16	17	18	19	20
Pre	6.8	12.3	5.8	7.1	8.9	5.1	6.4	11	8.9	5.3
Post	8.8	8.1	6.5	7.4	6.2	6.2	8.1	7.8	7.4	6.4
Change	+2.0	-4.2	+ .7	+ .3	-2.7	+1.1	+1.7	-3.2	+1.5	+1.1

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	7.14	1.99	.44	.82	+ .42	.41	.26
Post	7.04	.99	.22				
Change	-.11						

Auburn Reading Attitude Survey

Fourth Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in improvement of students' attitudes toward reading significance at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Reading Attitude

The mean score on the pre administration of the Auburn Reading Attitude Survey was 56.3. The standard deviation was 10.92. The standard error was 2.44. The mean score on the post attitude survey was 55.85. The standard deviation was 15.55. The standard error was 3.48. The covariance was 70.38. The correlation was .41. The standard error of the difference between the means was 3.32. t was .14 with 19 degrees of freedom. This score was below the t score of 2.09 necessary to reject the null hypothesis. The null hypothesis was not rejected at the .05 level of significance. There was no significant difference between the pre and post scores on the attitude survey. See Table 22 on page 119.

TABLE 22
AUBURN READING ATTITUDE SURVEY

Student Number	1	2	3	4	5	6	7	8	9	10
Pre	73	44	49	70	49	74.5	66	66	32	50
Post	76	40	51	63	51	70	68	70	42	63
Change	+3	-4	+3	-7	+2	-4.5	+2	+4	+10	+13

Student Number	11	12	13	14	15	16	17	18	19	20
Pre	58	56	47	57	48.5	50.5	52.5	61	53	69
Post	63	32	48	27	49	86	54.5	36.5	70	57
Change	+5	-24	+1	-30	+5	+35.5	+2.0	-24.5	+17	-12

Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t	
Pre	56.3	10.92	2.44	70.38	+41	3.32	.14
Post	55.85	15.55	3.48				
Change	-.45						

The Auburn Reading Attitude Scale

The Auburn Reading Attitude Scale (a copy is included in Appendix D) by Nolan Hatcher and Jono Wright of Auburn University of Auburn, Alabama was administered as a pre and post measure of students' attitudes towards reading. The data from this measure of attitude is presented in Table 23.

The Auburn Reading Attitude Scale was set up using positive and negative statements regarding reading. Some of the areas of reading attitude survey include child's feeling about types of reading. Is reading fun? Is there a value in having and reading books? Does he talk about what he reads?

From an analysis of the six students' performance two students had no change in their standard deviation from the pretest mean to their standard deviation from the posttest mean. Two students gained two standard deviations. One student gained three standard deviations and one student lost one standard deviation.

Summary

An analysis of the research data has been presented. The research hypothesis one and each of its sub-hypotheses regarding participating student growth in reading development through the use of visual literacy mater-

TABLE 23
SIX STUDENTS' READING ATTITUDE SCORES

Student No.	Pre Test	SD From Mean	Post Test	SD From Mean
7	66	+1	68	+1
10	50	-1	63	+1
13	47	-1	48	-1
16	50.5	-1	86	+2
19	53	-1	70	+1
2	44	-2	40	-1

Note: Pre Test Mean 56.3 Post Test Mean 55.85

ials and the language experience approach to reading was supported by the findings of this research project above the .05 level of significance.

Research hypothesis two and each of its sub hypotheses which focused on students' oral language development through the use of visual literacy materials and the language experience approach to reading was supported by the findings of this research project above the .05 level of significance.

Research hypothesis three which predicted that there would be an increase in written language through the use of visual literacy materials and the language experience approach to reading was supported by the findings of this research project. The only sub research hypothesis which was not supported at the .05 level of significance was one which focused on words per T Unit.

Research hypothesis four regarding attitudes toward reading was not supported at the .05 level of significance by the findings of this research project.

A comparison of six students' individual standard deviation from the pretest mean with their subsequent deviation from the posttest mean was presented.

Chapter V includes conclusions, summary and implications of the findings of this study. Recommendations for further research are also presented.

CHAPTER V

CONCLUSIONS, SUMMARY AND IMPLICATIONS OF FINDINGS

This chapter will contain conclusions derived from this research study. A summary of the findings is presented and implications of the findings are delineated. Problems encountered during the conduct of the study are enumerated. Recommendations for further research are provided. The chapter summary and a summary of the research study also appear in this chapter.

First Hypothesis

Visual literacy materials used in the language experience approach to reading will result in growth in reading facility when used with fourth grade students who are of normal intelligence and a year or more behind their ability level in vocabulary and/or comprehension or total reading score. There will be a significance level of .05.

This hypothesis was supported by the findings of this investigation. There was a difference between the twenty fourth grade students classed as remedial readers performance on the pre and post administration of the California Reading Test. This difference was significant

above the .05 level of significance for the total reading test and its subsections of vocabulary and comprehension. t was 4.73 for total reading, 3.03 for vocabulary and 3.73 for comprehension with 19 degrees of freedom.

The implications of the result of the findings are that visual literacy materials used in the language experience approach to reading used with fourth grade remedial reading students is an effective means of developing students' vocabularies, comprehension and total reading abilities.

Second Hypothesis

There will be greater facility in oral expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05.

The second hypothesis was supported by the findings of this investigation. There was a difference between the twenty fourth grade students classed as remedial readers performance on the pre oral language sample with their performance on the post oral language sample. This difference was significant above the .05 level of significance for oral language in total words, T Units and words per T

Unit. t was 3.56 for total oral words, 3.40 for T Units and 4.04 for words per T Unit with 19 degrees of freedom.

The implications are that visual literacy materials used in the language experience approach to reading used with fourth grade remedial reading students is an effective means of developing students' oral language facility.

Third Hypothesis

There will be greater facility in written expression as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension. There will be a significance level of .05.

The third hypothesis is supported by the findings of this investigation. There was a difference between the twenty fourth grade students classed as remedial readers performance on the pre written language sample with their performance on the post oral language sample. This difference was significant above the .05 level for written language in total words and T Units. There was no significant difference between students' pre and post number of words per T Unit. t was 5.04 for total words, 4.53 for T Units and .25 for words per T Unit with 19 degrees of freedom.

The implications are that visual literacy materials used in the language experience approach to reading used with fourth grade remedial reading students is an effective means of developing students' written language facility.

Fourth Hypothesis

Visual literacy materials used in the language experience approach to reading will result in improvement of students' attitudes toward reading significance at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension.

This hypothesis was not supported by the findings of this investigation. Difference between students' scores on the pre survey and those on the post survey were not significant at the .05 level of significance. t was .14 with 19 degrees of freedom.

The implications are that the time during which students participated may not have been long enough to bring about significant changes in students' attitudes. The test may not have been well suited to the measurement of fourth grade students' attitudes towards reading.

Further, the attitude survey may have been irrelevant to the type of program which was conducted. The students did not view the program as a "reading" program per

se. The attitude test should have referred to the students' feelings about themselves before and after the program rather than their feelings about reading.

The language experience approach combined with visual literacy materials was suitable for the purpose of this study. Students made significant gains in reading, oral language and written language facility. The reader should keep in mind that the number of participants for this study was limited to twenty students. This may limit the generalization which can be made from these findings. The findings would probably be applicable to a population with similar characteristics, reading abilities and from similar educational settings.

Problems

As was mentioned regarding the pilot study the time limit of one hour per day was too short to allow students time to consider at length the topics about which they were writing. If this researcher had been responsible for the total educational program the students could have been given more time to consider what they would write about and to integrate the reading program into the total curriculum.

It was difficult to transcribe students' taped stories. Often sections of the stories had to be listened

to several times before those sections could be understood. Further, since student talking was fairly rapid, the tape had to often be stopped in order to get all of the student's ideas down.

The non-narrated films used were within the interest range of the students. However, the large number of concepts presented in a short length of time presented difficulties for student writing even with taking notes. Probably to use the film more efficiently, students should have been allowed to view these films at least twice. The first time would provide them with the overall idea of the concept of the story of the film; the second showing students could notice and create details suggested in this visual medium.

The number of wordless picture books is somewhat limited. Each year a number of new wordless picture books are available. These books do not remain in print very long. A large number of non-narrated films are available. The expense of renting or purchasing these films is quite high.

Recommendations for Further Research

It is the recommendation of this researcher that a study comparing students' language and reading development with students similar to those used in this study using oral language based on wordless picture books and

non-narrated films made by themselves and using the language experience approach be conducted.

No significant difference was found in the pre and post attitude survey. It is believed by this researcher that further research is needed to develop a more suitable reading attitude survey identifying student attitude toward recreational reading, reading in the learning process, feelings about his own ability to read and his concept of the importance of reading.

A study similar to this investigation could be carried out at other grade levels in remedial and in developmental reading instruction situations.

Because of the universal language of pictures, a study could focus on the use of visual literacy and the language experience approach to reading as a means of language and reading development in teaching students English as a second language.

A long range study of the effects of using visual literacy techniques and experience stories in developing concepts and reading abilities of the same group of students over a number of years might be conducted.

As a means of developing upper level remedial reading students' reading abilities an investigation could be initiated combining the process of upper level students' writing and recording stories based on wordless picture

books and non-narrated films with having these students read their stories to younger students.

Further indepth research which investigates the relationship between students' abilities in sequencing pictures based on training with their ability to note sequences in stories which they read could be investigated.

Recognizing the potential experience background of low reading level adults, a study could be designed to develop the reading abilities of these individuals by using the language experience approach combined with the visual literacy techniques employing a wide array of visual media which participants develop and collect.

An investigation could focus on students' abilities to create wordless picture stories and/or non-narrated films following their writing experiences based on commercially prepared wordless picture stories.

The world in which students live today is one in which they must deal with a vast array of visual media. An investigation could be designed to develop students' abilities to consider carefully the visual media of advertisements through critical thinking skills include the recognition of propaganda techniques used to persuade through the visual recognition of accuracy versus distortion, and recognition of the influence of the visuals on the emotions.

Summary of Chapter V

The information presented in Chapter V was focused on the four research hypotheses. Three of the four hypotheses were supported by the findings of this study. The implications are that the language experience approach using visual literacy techniques is an effective means for the development of fourth grade remedial reading students' reading vocabulary and comprehension, and the development of their oral and written language.

Hypothesis Four was not supported by the findings of this research study. There was no significant difference in students' pre and post attitude scores.

Summary of the Study

The format of Chapter I included the introduction to this study with a statement of the problem educational implications, statement of hypotheses and definition of terms.

Information which was presented in Chapter II was a review of related research and literature. The areas of research included oral language research related to reading, the language experience approach to reading, and visual literacy.

The pilot study findings are delineated in Chapter III. The subject matter of the pilot study focused on the

procedures for the selection of students and for the conduct of the study an analysis of pilot study data was presented. This was followed by a discussion of problems related to the pilot study and changes implemented for the research study. The selection process and procedures used in the research study are indicated.

An analysis of the data collected which was based on each of the hypotheses was included in Chapter IV. This information was followed by Chapter V which was centered around conclusions, summary, problems and recommendations for further research.

APPENDICES

APPENDIX A

APPENDIX A

THE PILOT STUDY

The initial group of students that participated in the pilot study were designated by second, third and fourth grade teachers. This researcher administered The Lorge-Thorndike intelligence test and the California Reading tests pre measures for entrance into the project. To participate, students had to have an IQ score of 90 or higher and score at least a year or more below their grade expectancy in vocabulary and/or comprehension score on a pre-test. The multi-level edition of the Lorge-Thorndike Intelligence Test was administered by this researcher to approximately forty students. Level A was given to the third grade students. Level B was given to the fourth grade students. The California Reading test was also administered to these students by this researcher. Form W elementary level designed to test grades four, five and six was administered to the fourth grade students. Form X upper primary level designed to test grades two, three and low four was administered to the third grade students.

Nine students who had IQ's of 90 or better and who were at least one year or more behind their grade expectancy in vocabulary and/or comprehension as measured by

the California Reading Test were selected for this pilot study. The Bond and Tinker Expectancy Formula was used to determine individual student's grade expectancy levels. Two students that were close to 90 in IQ as measured by The Lorge Thorndike Intelligence Test were admitted to the pilot study project on the basis of their performance of 90 or better on the Weschler Intelligence Scale for Children. The range in IQ's for participating students was 90 through 112 with a Mean IQ of 98.3. The grade expectancy range was from 3.7 to 5.0 with a grade expectancy of 4.1. IQ's and Grade Expectancy scores for the nine students involved in the pilot study are listed in Table 24.

TABLE 24
PILOT STUDENTS' IQ AND GRADE EXPECTANCY

Student Number	IQ	Grade Expectancy
1	92	3.9
2	104	4.1
3	90	3.7
4	100	5.0
5	100	4.0
6	112	4.4
7	90	3.7
8	98	3.9
9	99	4.0

Two students were a year or more behind their grade expectancy in vocabulary only. Three students were a year or more behind their grade expectancy in reading comprehen-

sion only. Four students were a year or more behind their grade expectancy in total reading score.

A student's grade equivalency score is derived from a table included in the analysis chart of the California Reading Test which indicates a student's grade equivalency score based on his raw score performance on the test. This score was compared with the student's reading expectancy score. As indicated in the Definition of Terms included in Chapter I, reading expectancy is derived by the Bond Tinker Expectancy Formula as follows:

$$IQ \times \text{years in school (including first grade through all grades completed with any repeated grades counted as additional years)} + 1.0$$

A student with an IQ of 90 at the start of fourth grade has been in school three years. The IQ of 90 indicated as .90. Computation $(.90 \times 3 \text{ years}) + 1.0 = 3.7$ grade expectancy: for a student with an IQ of 100 at the middle of fourth grade (3.5 years in school), computation $(1.00 \times 3.5) + 1 = 4.5$ grade expectancy.

Students' grade equivalency scores on Form W Elementary and Form X Upper Primary of the California Reading Test are indicated in Table 25 along with their grade expectancy score figured through the Bond Tinker Expectancy Formula.

TABLE 25

PILOT STUDENTS' GRADE EQUIVALENCY READING SCORES
AND THEIR GRADE EXPECTANCY SCORES

Student No.	Vocabulary	Comprehension	Total	Grade Expectancy
1	3.4	2.6	3.0	3.9
2	3.5	3.1	3.1	4.1
3	2.4	3.0	3.0	3.7
4	4.1	4.0	4.0	5.0
5	2.1	2.6	2.6	4.0
6	2.7	2.8	2.8	4.4
7	2.3	3.1	3.1	3.7
8	2.7	3.1	3.1	3.9
9	3.1	3.0	3.0	4.0

The Procedures

The pilot study was conducted from September 20, 1973 and continued through December 18, 1973. Classes were held by the researcher five days a week for one hour each day during the fall semester of the 1973-74 school year. The researcher administered the same form of the Reading Attitude Survey to the students as pre and post measures. Oral and written samples by each student were taken at the start and the completion of this program.

Wordless picture books and non-narrated films were used as a basis for students' speaking and writing. Included in the forty-six wordless picture books for this study were such titles as By the Sea, by Berthe Amoss, The Knitted Cat, by Antonell Bollinger-Savelli, The Chimp and the Clown, by Ruth Carroll, The Ballooning Adventures

of Paddy Pork, by John Goodall and The Damp and Daffy Dongs of a Daring Pirate Ship, by Guillermo Mordillo. A complete list of the titles of wordless picture books used in the pilot study are included in this appendix.

Three non-narrated films were used for the pilot study. The titles were The Sea, The City and Dunes. Selected pictures from magazines were also used as a basis for student writing. A student's individual oral and written language was used as a basis for his and other students' reading development.

Students kept individual lists of words on file cards in file boxes. Each day as students identified words which they wanted to use or spell correctly, the words were added to their individual word banks, a collection of vocabulary words which an individual student keeps on file cards. When help with spelling words was needed by individual students in their writing these words were provided by this researcher or other students within the class. This researcher provided spellings of any words which students asked for.

During the days that a student was writing, he selected the particular wordless picture book which he wanted to write about. Students also dictated stories to this researcher, each other, or recorded them on tapes. Group stories were also written on select books and films. All students participated in these group compositions

with the teacher transcribing the story on the blackboard and one student recording it on paper. Copies of individual and group stories were made and given to students. This researcher edited the stories by individuals and small groups of children since they were to be used as a basis for reading development by the total group of students in the reading class. Misspelled words were corrected, subject-verb changes were made to bring about agreement. A word was inserted to make a sentence after consulting with the author(s) whenever a word was left out. Punctuation marks were placed as needed and words that needed to be capitalized were capitalized. The only changes made in editing any students' writings were those which would clarify the meaning conveyed by a student's writing as indicated by the student author.

In order to distinguish the methodology of this program from that of traditional approaches to teaching reading, no formal group instruction was given in word attack, word recognition or comprehension.

The students who are found to be remedial readers have been through traditional type programs which emphasize phonics drills, structural analysis, dictionary work, comprehension questions and work book activities as the primary focus of their reading. This program was designed in an effort to provide the remedial students with an alternative means of developing reading abilities without

formal group instruction in word attack, word recognition or comprehension. Through the language experience approach the students deal with language letter by letter and word by word as the story is written for them or they write their own stories. The materials they write about become so familiar to them that these reading skills (word attack, word recognition or comprehension) are not a large problem. Copies of some of the individual student's stories were written using the cloze procedure as a means of focusing attention on the use of context in order to make the reading process one of getting meaning. This researcher encouraged the individual student to consider the sense of sentences in dealing with the few words from their stories that they did not recognize on sight.

Analysis of the Pilot Study Data

A Hewlett Packard 65 hand calculator was used to calculate the means of the pre and posttests and samples, the standard error of the means, standard deviation of the means, standard error of the difference between the mean, covariance, correlation coefficient and t scores.

California Reading Test

The California Reading Test scores were compared on the basis of students' scores on the pre and posttest in vocabulary, comprehension and/or total reading.

Total Reading Score

First Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in growth in reading significance at the .05 level of confidence when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

The mean score on the total pre reading test was 31.33. The standard deviation was 9.47. The standard error was 3.16. The mean score on the total post reading test was 51.11. The standard deviation was 13.70. The standard error was 4.57. The covariance was calculated as +88.33. The correlation coefficient was calculated as +.68. The standard error of the difference between the means was +3.34. t was 5.92 with 8 degrees of freedom. In order to be significant at the .05 level with 8 degrees of freedom t had to be at least 2.31. The t score for total reading was well above 2.31. The null hypothesis on total reading

was rejected and the research hypothesis accepted above the .05 level. See Table 26 on page 144.

Reading Vocabulary

First Sub Null Hypothesis I

There will not be an increase in student vocabularies significant at the .05 level when visual literacy materials and the language experience approach to reading are used.

The mean score on the pretest section was 13.11. The standard deviation was 6.74. The standard error was 2.25. The mean score of the posttest was 23. The standard deviation was 7.94. The standard error was 2.65. The covariance was calculated as +27.25. The correlation coefficient was +.51. The standard error of the difference between the means was +2.45. t was 4.04 with 8 degrees of freedom. This score was above the t score of 2.31 which was necessary for significance at the .05 level. The null sub hypothesis on reading vocabulary was rejected and the research accepted above the .05 level of significance. See Table 27 on page 145.

Second Sub Null Hypothesis

Students' comprehension will not be increased at a significance level of .05 when visual literacy materials and the language experience approach to reading are used.

TABLE 26

PILOT READING TOTAL SCORE

Student Number	1	2	3	4	5	6	7	8	9
Pre	26	30	32	30	26	27	47	18	46
Post	55	64	57	53	52	34	60	23	62
Gain	+29	+34	+25	+23	+26	+7	+13	+5	+16

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	31.33	9.47	3.16	+88.33	.68	3.34	5.92
Post	51.11	13.70	4.57				
Gain	+17.56						

TABLE 27
PILOT READING VOCABULARY

Student Number	1	2	3	4	5	6	7	8	9
Pre	10	13	16	7	7	14	25	5	21
Post	19	32	27	21	28	15	26	8	31
Gain	+9	+19	+11	+14	+21	+1	+1	+3	+10

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	13.11	6.74	2.25	+27.25	+.51	+2.45	+4.04
Post	23.00	7.94	2.65				
Gain	+9.89						

The mean score on the pretest comprehension section was 18.22. The standard deviation was 4.32. The standard error was 1.44. The mean score on the posttest was 28.11. The standard deviation was 7.17. The standard error was 2.39. The covariance was calculated as +18.35. The correlation coefficient was +.59. The standard error of the difference between the means was 1.93. t was 5.14 with 8 degrees of freedom. This score was above the t score of 2.31 which was necessary for significance at the .05 level. The null sub hypothesis on reading comprehension was rejected and the research hypothesis accepted above the .05 level of significance. See Table 28 on page 147.

Pilot Study Oral Language Sample Analysis

The Kellogg Hunt T Unit was used to obtain data on students' transcribed oral samples. The students' pre and post oral samples were analyzed in terms of total words, T Units and words per T Unit. The oral samples were based on a pre and post oral language sample concerning a wordless picture book which a student chose to write about. Each student's post oral language sample was based on the same wordless picture book which he had chosen for the pretest.

TABLE 28

PILOT READING COMPREHENSION

Student Number	1	2	3	4	5	6	7	8	9
Pre	16	17	16	23	19	13	22	13	35
Post	36	32	30	32	24	19	34	15	31
Gain	+20	+15	+14	+9	+5	+6	+12	+2	+6

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	18.22	4.32	1.44	+18.35	+.59	+1.93	+5.14
Post	28.11	7.17	2.39				
Gain	+9.89						

Oral Language Hypothesis

Second Null Hypothesis

There will not be greater facility in oral expression significant at the .05 level as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Total Words in Oral Language

The mean of the total number of words derived from the pre oral transcribed samples was 363.78. The standard deviation was 177.62. The standard error of the mean was 59.21. The mean of the total number of words derived from the post oral transcribed samples was 285.67. The standard deviation was 141.15. The standard error was 47.05. Covariance was calculated as +8206.16. The correlation was .327. The standard error of difference between the means was 2.41. t was 1.25. This t score was below the 2.31 score necessary to indicate significance at the .05 level. The null hypothesis was not rejected. There was no statistical difference between the pre and post number of total words used in oral language samples. See Table 29 on page 149.

TABLE 29
PILOT TOTAL ORAL WORDS

Student Number	1	2	3	4	5	6	7	8	9
Pre	190	612	334	200	450	426	224	200	638
Post	225	179	296	220	204	215	421	204	607
Gain	+35	-433	-38	+20	-246	-211	+197	+4	-31

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	363.78	177.62	59.21	+8206.16	+.33	62.41	1.25
Post	285.67	141.15	47.05				
Gain	-78.11						

T Units.--Table 7 indicates data obtained from the students' pre and post oral language samples. The mean number for the T Units in transcribed pre oral samples was 50.00. The standard deviation was 21.38. The standard error of the mean was 7.13. The mean number for the post T Units in transcribed post transcribed oral samples was 40.67. The standard deviation was 18.95. The standard error of the mean was 6.32. Covariance was calculated as +161.50. The correlation coefficient was +.398. The standard error of the difference between the means was 7.40. t was 1.26 with 8 degrees of freedom. There was no significant difference between the pre and post number of T Units. See Table 30 on page 151.

Words Per T Unit

The mean of the number of words per T Unit derived from the pre oral transcribed samples was 7.11. The standard deviation was .73. The standard error was .25. The mean of the number of words per T Unit was .25. The mean of the number of words per T Unit derived from the post oral transcribed samples was 6.91. The standard deviation was .88. The standard error was .29. Covariance was calculated as +.03. The correlation coefficient was +.05. The standard error of the difference between the means was +.37. See Table 31 on page 152.

TABLE 30
PILOT ORAL LANGUAGE T UNITS

Student Number	1	2	3	4	5	6	7	8	9
Pre	31	75	47	25	60	63	33	32	84
Post	36	29	43	28	34	24	52	34	86
Gain	+5	-46	-4	+3	-26	-39	+19	+2	+2

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	50.00	21.38	7.13	+161.60	+.398	7.40	1.26
Post	40.67	18.95	6.32				
Gain	-.7						

TABLE 31
PILOT ORAL LANGUAGE WORDS PER T UNIT

Student Number	1	2	3	4	5	6	7	8	9
Pre	6.1	8.1	7.1	8	7.5	6.7	6.7	6.2	7.6
Post	6.3	6.1	6.8	7.8	6	8	8.1	6	7.1
Gain	+ .2	-2.0	-.3	-.2	-1.5	+1.3	+1.4	-.2	-.5

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	7.11	.74	.25	+ .03	+ .05	+ .37	.54
Post	6.91	.88	.29				
Gain	-.3						

The second null hypothesis was not rejected since none of the t scores for the sub hypotheses were greater than 2.31. A score of 2.31 was needed to reject the null hypothesis with 8 degrees of freedom.

Written Sample Analysis

The Kellogg Hunt T Unit was used to obtain data on students' written samples. The students' pre and post written samples were analyzed in terms of total words, T Units and words per T Unit. The written samples were based on a wordless picture book which a student chose to write about. Each student's post sample was written on the same book which he had chosen for the pretest. Facility in written expression as considered in this study included total words, T Units and words per T Unit which students used in pre and post written language samples.

Third Null Hypothesis

There will not be greater facility in written expression significant at the .05 level as a result of using visual literacy materials within the language experience approach to reading when used with students ages nine to eleven who are of normal intelligence and who are a year or more behind their ability level in reading vocabulary and/or comprehension.

Written Sample Total Words

The mean number of total words for the pre written samples was 88.22. The standard deviation was 58.6. The standard error was 19.53. The mean number of total words for the post written samples was 99.89. The standard deviation was 55.12. The standard error was 18.37. The covariance was calculated as +246.28. The correlation coefficient was +.75. The standard error of the difference between the means was 13.42. t was +.87 with 8 degrees of freedom. This was below the t score of 2.31 necessary to reject the null hypothesis. The null hypothesis was not rejected. There was no significant difference between the pre and post number of words used for written expression. See Table 32 on page 155.

The mean number of T Units in the pre written sample was 14.44. The standard deviation was 10.22. The standard error was 3.41. The mean number of T Units in the posttest written sample was 15.78. The standard deviation was 7.87. The standard error was 2.62. The covariance was calculated as +60.36. The correlation coefficient was +.75. The standard error of the difference between the means was +2.25. t was .59 with 8 degrees of freedom. There was no significant difference between the number of T Units used in pre and post written samples. See Table 33 on page 156.

TABLE 32

PILOT WRITTEN LANGUAGE TOTAL WORDS

Student Number	1	2	3	4	5	6	7	8	9
Pre	62	55	112	105	66	224	21	97	52
Post	133	117	64	95	48	220	34	88	100
Gain	+71	+62	-48	-10	-18	-4	+13	-9	+48

	Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	88.22	58.60	19.53	+2426.28	+.75	+13.42	+.87
Post	99.89	55.12	18.37				
Gain	+19.11						

TABLE 33
PILOT WRITTEN LANGUAGE T UNITS

Student Number	1	2	3	4	5	6	7	8	9
Pre	8	9	17	20	11	38	3	15	9
Post	16	24	12	19	10	31	5	13	12
Gain	+8	+15	-5	-1	-1	-7	+2	-2	+3

	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	14.44	10.22	3.41	+60.36	+2.25	+59
Post	15.78	7.87	2.62			
Gain	+1.34					

Written Words Per T Unit.--The mean number of words per T Units for the pre written sample was 6.3. The standard deviation was .77. The standard error of the mean was .58. The mean number of words per T Units for the post written sample was 6.36. The standard deviation was 1.43. The standard error of the mean was .476. The covariance was calculated as +.50. The correlation was +.45. The standard error of the difference between the means. t was +.13 with 8 degrees of freedom. There was no significant difference between the pre and post words per T Unit. See Table 34 on page 158.

The null hypothesis H. 3 was not rejected because none of the sub hypothesis had t scores above 2.31 which was necessary for a significance level of .05 with 8 degrees of freedom.

Auburn Reading Attitude Survey

Fourth Null Hypothesis

Visual literacy materials used in the language experience approach to reading will not result in improvement of students' attitudes toward reading significant at the .05 level when these materials are used with students ages nine to eleven who are a year or more behind their ability level in reading vocabulary and/or comprehension.

TABLE 34
PILOT WRITTEN WORDS PER T UNIT

Student Number	1	2	3	4	5	6	7	8	9
Pre	7.8	6	6.6	6.2	6	5.9	7	6.5	5.7
Post	8.3	4.8	5.3	5.0	4.8	7.1	6.8	6.8	8.3
Gain	+1.5	-1.2	-1.3	-1.2	-1.2	+1.3	-.2	+.3	+.6

Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error of Difference Between the Means	t
Pre	6.3	.77	.258	+.50	+.45	.43
Post	6.36	1.43	.476			
Gain	+.04					

TABLE 35
PILOT READING ATTITUDE

Student Number	1	2	3	4	5	6	7	8	9
Pre	61	59.5	24	42.5	41	17	35	44	41.5
Post	61	60	39	60	43	52	36	43	46.5
Gain	0	+ .5	+15	+17.5	+2	+35	+1	-1	+5

Mean	Standard Deviation	Standard Error	Covariance	Correlation	Standard Error the Difference Between the Means	t	
Pre	40.61	14.38	4.79	+77.07	.56	4.02	2.07
Post	48.94	9.63	3.21				
Gain	8.33						

The mean score on the pre reading attitude survey was 40.61. The standard deviation was 14.38. The standard error was 4.79. The mean score on the post survey was 48.94. The standard deviation was 9.63. The standard error was 3.21. The covariance was calculated at 77.07. The correlation coefficient was .56. The standard error of the difference between the means was 4.02. t was 2.07 with 8 degrees of freedom. This score was below the t score of 2.31 which was necessary to reject the null hypothesis at the .05 level of significance. The null hypothesis was not rejected. There was no significant difference between the pre and post reading attitude surveys. See Table 35 on page 159.

Samples of Students' Oral and Written Expression

Early Group Story Based on the Book Bobo's Dream, by Martha Alexander

One day a boy and his dog were going to play football. He stopped at the store and got a bone. He put the bone. Terry sat down by the tree and started reading. A big dog took the bone. Bobo got Terry's attention. They ran after the big dog. They caught the big dog. Terry got the bone and gave it to Bobo.

Middle Group Story Based on the Book
One, Two, Three, To The Zoo, by Eric Carle

The smoke is coming out of the train. The train is going by. The engineer is driving the train. There is coal in the box car. The elephant is going to step on the mouse on the flat car. The little hippopotamus is mad at the big hippopotamus. He is going to bite the big one. The giraffe was sniffing at the mouse. The giraffes have long necks. One giraffe is kneeling on the floor of the flat car. One lion is licking his paw. The lion is looking at the mouse. The big bear is trying to eat the mouse. One bear is staring at me. The bear is sleeping with one paw over another. There is a mouse on the sleeping alligator. One alligator is looking down at another alligator. The alligators are sticking out their tongues. The seals are playing in the water. One seal is laying down. The seal is walking. The seal is looking at the mouse. The monkeys are jumping. One monkey is looking at the mouse. The monkey is hanging on another. I see a purple monkey. I see a blue snake. I see a cobra. There's a snake in the tree. I see a rattlesnake. I see a purple and green bird. I see two owls and one has an eye shut. I see a green bird. Two birds are flying in the cage. The animals are happy to get to the zoo.

Late Group Story Based on Perception
Film, "The Sea"

The birds are sitting on a wall they are seagulls.
There is seaweed on the beach.

The battleship is pulling in to the dock. They
are fighting. The tug boat is sinking.

A wave is going over the rocks. There is a tidal
wave. The water is rough. The seagulls are flying away.

The tidal wave is over. The waves are going over
the rocks. It looks like suds. The suds is over the rocks.
The water is turned to suds.

I see some palm trees. The water is going over
the rocks. A sand bar is washed away. The water is blue-
green. The foam is white. A half of a statue fell. The
rock was shaped like a face.

The palm tree is blowing in the wind. The water
is shallow.

The water is flowing sideways. There is slushy
sand and mud on the beach.

A rock has been moved on the beach. It left its
shape. There is a big rock. There is a cave. There is
petrified wood. There is a starfish.

Grass is growing by the sea. The rock is covered
with seaweed. The rock is shaped like a dinosaur. The
lizard is eating a crab.

There are some foot prints in the sand. The girl made the foot prints. She is walking on the beach. The boy and girl are playing in the water. The people are walking on the beach. People are in the water. A wave hits a lady. The boy and girl are sitting on the beach. The sun is setting. There is a boat. There is a bell. There is a flag.

Early Written Sample Based on
Circus, by Brian Wildsmith

The circus is coming, with clowns doing tricks on a horse, with bears on bikes, with a man with dishes on his head and a man standing on his hands with dishes on his head. A man was standing on a horse.

A tiger was standing on a box. A lion was standing on a box. A monkey was walking on a line. An elephant was walking on some bottles. The birds were seesawing. The seals were playing.

Later Written Sample Based on the Book
The Oh Ball, by Gertrude Espencheid

The boy and the dog were walking and the bird was outside looking. They were going where everybody was looking at them and the bird was in the road. They were walking and found a ball next to some flowers. And the little boy was going to get it and it went to the dog. He was

trying to get the ball and it went to a man. It went around a tree and they tried to get it. The boy looked and saw it. The boy climbed and got it. He tied it to his string. They were going to leave and the bird got out to get the ball. He was trying to get it. The people got mad. The little boy was sad about the ball. They were going to get the ball. The people got mad at the little boy and the little boy gave it back. The little boy was crying and stopped and looked at it. He was telling it to come on and it did. He played with it and he left. They were going around in a circle. And they went to bed.

Early Written Sample Based on the Book
Elephants, by Ellie Simmons

Debra went to town for a walk. She saw a funny elephant. When she was on the street she saw two elephants but one of them was in two. When she got home she was a plain elephant. She looked at a book about elephants. She fell asleep and dreamed that she was on a elephant in the bed. The elephant was walking.

Later Written Sample Based on the Book
The Adventures of Paddy Pork, by John
Goodall (From Same Student)

Paddy Pork went to the shop. He saw the circus parade. He ran to catch up with them but he could not.

He was lost. A wolf saw him. As you probably know what a wolf would do to a pig. But he said come to my home for a meal. He ate his meal and fell asleep. That's when he made his move he was coming toward him when he touched him, Paddy Pork woke up. He ran toward the door. The wolf did not catch him because he opened the door and it hit the wolf. Down he ran so fast he was gone in a jiffy. He saw a big circus tent. In the tent were some bears. One of the bears did tricks with the baby bear. He did a trick with Paddy Pork then he fell down. He tried to jump in a hook but he jumped on the bear. He tried to juggle but he hit them in the head so he had to leave, crying. He saw a stone. He sat on it crying. A rabbit saw him. The rabbit pointed to town. Home again. His mother saw him and they hugged each other and his mother put him to bed because he was sleepy and she gave him a sign. She put it over his bed.

Early Oral Sample Based on the Book
Look What I Can Do, by Jose Aruego

One carabao was asleep. Another carabao came along and said, "Look what I can do."

The one that was asleep woke up and then the Carabao said again, "Look what I can do."

"That is good. Let me try it. O.K. I can do it too." "That is good."

They ran to the flowers. They played with each other. They picked flowers. They played and jumped over the log. They fell off the edge. The water was going fast. A tornado came and they fell into a hole. It was dark in there. They came out at a land. They just fell down. Another caraboa came. He said, "Look what I can do." They sat on him.

Later Oral Sample Based on the Book
Making Friends, by Eleanor Schick

One day James saw an ant. He said "hi" to the ant. On the way to the park James saw a squirrel. Mrs. Nichols saw Mrs. Smith and James saw a caterpillar. James saw a butterfly. He tried to catch the butterfly while Mrs. Nichols waited for the bus. They got on the bus and Mrs. Nichols was reading a letter while James looked at the bird that Mrs. Knickerbacher. James was at the grocery store and he saw a spider. His mother was buying shampoo. Mrs. Nichols saw Mrs. Smith at the post office while James was looking at the cat that Mrs. Smith had. Mrs. Nichols saw Mrs. Smith. Mrs. Smith saw Mrs. Ellis while Jerry was playing with a rabbit. While Mrs. Nichols looked at the thrift shop, James played with a dog. James saw a horse and he petted it. It was a policeman's horse. James and his mother went to the park and saw a man. James saw Cecilia. Mrs. Nichols said, "Hi," to Mrs. Curran. They

got each other's hands and were running to the swings.
James and Cecilia swung together.

Non-Narrated Films Used in the Pilot Study

The Sea.--This film is a vivid presentation of experiences near the sea.

The City.--The sights of the city in many and varied situations are indicated with a focus on unusual objects.

Megalopolis.--The story of a clay ball from which buildings are built.

An Annotated Bibliography of Wordless Picture Books Used in This Project

Alexander, Martha. Bobo's Dream. New York: Dial, 1970.

The story is about Bobo, a Dachsund, who has his bone stolen by a large dog. The bone was retrieved by Bobo's owner. Bobo falls asleep and dreams that he is the hero in returning his owner's football which bigger boys have taken away.

Alexander, Martha. Out, Out, Out. New York: Dial, 1968.

When a pigeon flies into the open window of a house several people try unsuccessfully to shoo him out. Using only a trail of cereal a little boy makes a trail of cereal to the window where the bird flies out.

Amoss, Berthe. By the Sea. New York: Parents' Magazine Press, 1969.

Children are playing by the sea. A little boy flies his red kite. The kite pulls him away up into the air. The little boy goes higher and

higher into the sky. His little dog gets a gas filled balloon and follows the little boy to a cloud. Together they sail down. A bird pecks the balloon. The little boy and the dog fall into the sand on the beach.

Anderson, Laurie. The Package; A Mystery. Indianapolis: Bobbs-Merrill, 1971.

The story of the strange journey of a package. The package is first carried by an old woman with a bicycle. After this the package changes hands a number of times as it continues on.

Ardizzone, Edward. The Wrong Side of the Bed. New York: Doubleday and Company, 1970.

The story of a little boy who gets up from bed in a bad mood. Everything seems to go wrong for him from spilling things at breakfast to being roughed up by bullies. He finds a quarter and thinks about buying candy but he ends up buying flowers for his mother.

Aruego, Jose. Look What I Can Do. New York: Scribners, 1971.

Two bulls play the game of "Look What I Can Do." Each bull tries to outdo the other. They combine to do things together and get into all kinds of predicaments.

Barton, Byron. Elephant. New York: Seabury, 1971.

On the way home from school a little girl sees a toy elephant in a store window. She sees elephants on posters, in a book and on television. She has a strange dream about elephants who took her through a forest. The next day her parents take her to the zoo to see real elephants.

Baum, Willi. Birds of a Feather. Reading, Massachusetts: Addison Wesley, 1969.

A bird settles in a lady's hat to enhance his beauty. He is trapped and caged but finally gets away.

Bollinger-Savelli, Antonella. The Knitted Cat. New York: Macmillan, 1971.

A little girl knits a striped cat. A mouse pulls a strand of yarn loose and unravels the cat's tail. An own ties up the cat's tail. The girl finally reknits the tail.

Carle, Eric. Do You Want to Be My Friend? New York: Crowell, 1971.

A mouse meets a number of animals including a horse, a lion, a peacock and other animals. He finally meets a mouse that becomes his friend.

Carroll, Ruth. The Chimp and the Clown. New York: Walck, 1968.

A chimp and a clown are in the circus parade. The chimp is dressed like a little baby. The chimp leaves the clown, climbs a tree and gets into all kinds of trouble at the zoo. Then the chimp frightens a mother in the park. He gets in a boat with two girls and the boat tips over. The clown rescues him and they return to the circus.

Carroll, Ruth. The Christmas Kitten. New York: Walck, 1970.

A boy tries to give a kitten away but the mother of the family doesn't need a kitten. The kitten attempts to get in several times before he is finally successful in staying inside the house.

Carroll, Ruth. What Whiskers Did. New York: Walck, 1965.

The story of a little dog that breaks loose from his master to chase a rabbit. He makes friends with the rabbits when he chases the rabbit into its hole.

Espenscheid, Gertrude. The Oh Ball. New York: Harper and Row, 1966.

A little prince and his dog play out in the courtyard of the palace. They notice a ball which does all sorts of strange things. The boy catches the ball and ties a string around it. The ball causes trouble for the little boy. The little boy puts the ball in a cage. The ball is finally free and again there is fun in the courtyard.

Fuchs, Eric. Journey to the Moon. New York: Delacorte, 1969.

The Apollo 11 mission is told in illustrations. The sequence starts with the blast off, continues with the moon landing and ends with the splashdown return to earth.

Gilbert, Elliot. A Cat Story. New York: Holt, Rinehart and Winston, 1963.

The adventures of a mother cat and her kittens is told. The mother tries to catch a mouse and a bird but is not successful. The kittens play in the sun. The kittens and the mother finally go home.

Goodall, John. The Adventures of Paddy Pork. New York: Harcourt, Brace and World, 1968.

While Paddy, a pig, and his mother were at the store, Paddy ran away to see the circus. He has narrow escapes from death when he meets a wolf who wants to have him for dinner. He goes on to the circus and has some embarrassing experiences there. (He finally returns home.)

Goodall, John. The Ballooning Adventures of Paddy Pork. New York: Harcourt, Brace and World, 1968.

Paddy, the pig left home to see the world in a balloon flight. As he goes over an island in the ocean he sees that some creatures are trying to cook another live pig. He lands on the island and successfully rescues the pig. They fly off together and have some narrow escapes before they finally arrive back at Paddy's home town.

Goodall, John. Shrebettina's Birthday. New York: Harcourt, Brace and World, 1971.

Shrebettina's activities on her birthday are shown as she prepares for her birthday party. Many people come to her party. They all have a good time. Shrebettina's friends leave and she goes to bed.

Hoban, Tina. Look Again. New York: Macmillan Company, 1971.

We get a close up peek at a portion of a familiar object through a peek hole. The pictures are well done. Children can guess what the picture is and then look to see if their guess is right.

Hoban, Tina. Shapes and Things. New York: Macmillan, 1970.

The silhouette shapes of things which may be found in and around the house are shown. There is no sequential story but the book can be used for talking about what the items are and how they are used.

Hogrogian, Nonny. Apples. New York: Macmillan Company, 1972.

The life cycle of apples and apple trees is presented in an exciting way.

Krahn, Fernando. A Flying Saucer Full of Spaghetti. New York: Dutton, 1970.

Upon seeing the needs of a poor little girls a group of elves go out in search of food. They find a plump little rich girl who is not eating her spaghetti. They fly the spaghetti back to the poor girls' house.

Krahn, Fernando. How Santa Clause Had A Long and Difficult Journey Delivering His Presents. New York: Delacorte, 1970.

Santa is awakened by his helper bear and together they pack the toys to deliver. On the way Santa's sleigh rope to the reindeer breaks. The toys try to help get the sleigh ready for renewed flight. Finally, the toys are delivered.

Mari, Iela and Enzo. The Apple and the Moth. New York: Pantheiobm, 1969.

A moth larva hatches from an egg laid inside of an apple. The life cycle of the moth is depicted by the illustrations.

Mari, Iela and Enzo. The Chicken and the Egg. New York: Pantheon, 1969.

A speckled hen prepares a nest, lays an egg and sits on the nest until the egg finally hatches. The young chick grows and grows.

Mayer, Mercer. A Boy, A Dog and A Frog. New York: Dial, 1967.

A little boy and his dog have many funny adventures as they try to catch a frog. They are not successful in their efforts to capture one. A frog follows them home and hops into the bath tub with them.

Mayer, Mercer. Frog, Where Are You? New York: Dial, 1969.

A boy has a frog in a jar which is in his bedroom. That night the frog hops out of the jar and goes off to a pond. The next morning the little boy discovers that the frog is gone. The little boy takes his dog and goes looking for the frog. He finds the frog with a frog family.

Meyer, Renate. Hide-and-Seek. New York: Bradbury, 1969.

A little boy hides and a girl tries to find him. She looks in several places. The boy finally gets caught.

Meyer, Renate. Vicki. New York: Atheneum, 1969.

This is the story of a lonely little girl. Nobody wants to play with her so she imagines a friend to play with.

Miller, Barry. Alphabet World. New York: Macmillan Company, 1971.

A series of pictures with parts highlighted which represent the letters a through z.

Mordillo, Buillermo. The Damp and Daffy Doings of A Daring Pirate Ship. Holland: Harlin Quist, 1971.

A colorful picture book that tells a story of a group of pirates. The pirates carry their boat down a street. They launch the boat. They run across another ship with which they do battle. They go to the island where they have buried their treasure. The load the boat with all the gold. The cargo is so heavy that the boat sinks. The pirates swim back to the island where they build a new ship.

Olschewski, Alfred. Winterbird. Boston: Houghton Mifflin Company, 1969.

This is the story of a bird who walks around in the snow. A cat follows the bird and a dog follows the cat. The cat tries to attack the bird. The dog growls at the cat. Then a flock of birds comes to the bird's rescue and form in the shape of a giant cat which scares the dog and cat away. The bird is happily singing in the tree as the story ends.

Ringi, Kjell. The Winner. New York: Harper and Row, 1969.

Two men are on the beach in their swimming trunks. They take turns trying to out do the other one. Finally one of the men comes out on a dragon. The dragon eats both of them and then leaves.

Schick, Eleanor. Making Friends. London: Macmillan, 1969.

A little boy goes down town with his mother. On the way he sees a number of animals. They finally go to the park where the little boy meets a friend.

Simmons, Ellie. Cat. New York: David McKay Company, Inc., 1968.

The adventure of a little girl and a stray cat which finally becomes her pet.

Simmons, Ellie. Family. New York: David McKay Company, Inc., 1970.

The story of a little girl who has a baby sister born into her family. Grandma comes to stay with the little girl. The story concludes with the little girl holding the new baby.

Simmons, Ellie. Wheels. New York: David McKay Company, Inc., 1969.

A story of a little boy's adventures with wheels at the fair, at home, at stores and finally with his own new tricycle.

Steiner, Charlotte. I Am Andy. New York: Knopf, 1961

A number of chapters tell the story of the interesting adventures of a boy named Andy. The

story starts out with Andy in the spring when he finds a cat and ends up at Christmas time when he is decorating the Christmas tree.

Ungerer, Tomi. One, Two, Where's My Shoes? New York: Harper and Row, 1964.

The various shapes of shoes are shown as parts of animals, people or of things such as boats. There is no story sequence in this book.

Ungerer, Tomi. Snail Where Are You? New York: Harper and Row, 1962.

This is a series of varied pictures which include the snail shape in a variety of places. The pictures are entertaining.

Vasiliu, Mircea. What's Happening? New York: John Day, 1970.

This book tells the story of the events that happen in a small town. A wide variety of scenes are shown.

Wezel, Peter. The Good Bird. New York: Harper and Row, 1964.

A bird notices a goldfish in a house. The goldfish is sad because he is so hungry. The bird flies away and finds a worm. The worm is shared between the two.

Wildsmith's Brian. Circus. New York: Watts, 1970.

In Wildsmith's unique and colorful book a circus comes to town. A wide variety of circus acts are depicted. At the close of the big top show the circus leaves town.

Wondriska, William. A Long Piece of String. New York: Holt, Rinehart and Winston, 1963.

In order from A through Z a string goes around animals, buildings, plants and things until it goes through a zipper.

APPENDIX B

APPENDIX B

The same set of wordless picture books as used for the pilot study were used for this study. See page 167 of Appendix A.

Non-Narrated Films Used in This Study

"Solo"

The colorful adventuresome story of a lone mountain climber is beautifully shown.

"Chromophobia". Distributed by International Film Bureau, Chicago, Illinois.

The story of the efforts of soldier type men to do away with color. Happily their efforts are in vain.

"A Tale for Everybody". A Beaux Arts/Vita Film.

Two bugs are playing. They find an egg. They pretend that the egg is a car, an airplane and many other things. Each wants the egg for his own purpose. They fight. A chick hatches out of the egg. The bugs don't notice the chick. The chick has them for lunch.

"The Fence". An Omega Film.

The story about the problems a man creates when he throws trash over his fence. A war breaks out between the man and his neighbor. The picture ends with a flashback to the man throwing and receiving flowers.

"A Rock in the Road". A Beaux Arts/Vita Film.

A man comes down the road and trips over a rock. He lands in a hole and is very angry. He puts the rock in the road. Someone else falls over

it. This happens several times. Finally a man comes down the road, removes the rock, and fills in the hole.

"Conformity". An Omega Production.

People tend to adopt the habits of those around them. This pattern of similarity is repeated again and again.

"Wheels, Wheels, Wheels."

A boy rides down the hill inside an old tire. From this point we see a visual array of wheels in many forms from trucks, cars, gears, ferris wheels, and many other examples of the many uses of wheels.

"Dunes".

A visual poem of the desert wasteland. The small animals of the desert are shown. The beauty of the desert is portrayed in the daylight and sunset with the wind blowing the weeds and the sand.

"At Bullfrog Lake".

A boy and girl explore the many interesting living things surrounding and in a pond. A frog narrowly escapes becoming the meal for a snake.

"The Swimming Hole".

A boy builds a dam on a small stream so that he can have a swimming hole. He notices what effect the dam has on life in and around the stream. The boy has to decide what to do about the stream.

"This is My Friend".

Two boys are walking down the street. They run off with a little girl's doll. The doll gets broken. The boys mend the doll and the three children become friends.

"The Little Blue Apron". A Beaux Arts/Vita Film.

The story of a bird that frees a blue apron from the clothesline. Together they fly through the sky. They have several narrow escapes from danger. The bird got struck by lightning and the button on the apron became a star in the sky.

"Leaf"

The story of a yellow autumn leaf which falls down from a tree. It is blown about by the wind down a cliff and finally lands in a stream. It floats down the stream. The beauty of nature is shown throughout the film.

Sample Oral Stories

Early

Student No. 19

Based on the Book
The Good Bird, by Peter Wezel

Once there was a bird that was sitting on top of the tree. The tree was up on the hill. There was a house below the hill. The bird looked in the window. There was nothing. So the bird flew to the window and he was a fish in a fish bowl. The fish was swimming around the bowl. The bird flew close to the fish bowl the bird said what are you so mad about. "I am hungry" said the fish. "I'll go get you something to eat." The bird flew out the window to get the fish something to eat. The fish was looking at the bird as he flew out. The day was a bright sunny day. There was a cone on the ground beside the tree. There was a bait in it. The fish was looking at the cone. The bird opened the cone. There was a bait in it. So the bird got the bait and took it to the fish. After the bird flew back in the window. The fish started smiling because he saw the worm.

The bird flew up on top of the bowl to give the fish half of the bait. The fish and the bird were both happy. The bird had half and the fish had half. They both were smiling. After the sun came up the fish and bird both had eaten the bait. The bird was brown and pink. The plants were dark green.

Later

Student No. 19

Based on the Book
1, 2, 3 to the Zoo, by Eric Carle

Once upon a time there was a tootin' train with an engineer in it. Number one there was an elephant on it. There were ten mice on the train. One mouse crept up with the elephant. Second there were two hippopotamus'. Then the second mouse went up with the hippopotamus. Then there was one elephant and two hippopotamus on the train. The hippopotamus had his large mouth open. Then there was one elephant and two hippopotamus' were on the tootin' train. Third there were three giraffes on the train. One giraffe was looking at the mouse. One of the other ones was eating hay. The other giraffe was looking at the second giraffe eating. There were three animals on the train. Their names were Freddie the Elephant, Rufus the hippopotamus, and Elliot the giraffe, which they called the long legged baboon. Fourth there were four lions on the train. The fourth mouse crept up with the lions. The mouse was

on the second row. The first lion was running, the second lion was sleeping, the third lion was staring at the mouse, the fourth lion was looking out the window.

There were four animals on the train. All of the lions were Eric. So the elephant's name is Freddie, hippopotomus' name is Rufus, the giraffe's name is Elliott, and the lion's name is Eric. Number five is the bear. The fifth mouse crept up with five bears. The first bear was asleep. The second one was strange looking. The mouse thought the third bear was the president. So the fourth bear was telling the fifth bear that the mouse goes with the bear. The fifth bear was listening like he never heard anything before. The bear's name was Rusty. Then there were five animals on the train. They were Freddie the elephant, Rufus the hippopotamus, Elliott the giraffe, Eric the lion and Rusty the Bear. Next there were six alligators. The fifth mouse crept up with the alligators. The alligator that was asleep was the alligator that the mouse was crawling on. The second alligator was looking down at the fourth alligator, the third alligator was looking up at the second alligator. The fifth alligator was sticking his tongue out, the sixth alligator was looking out the window. There were six animals on the train, they were Freddie the elephant, Rufus the hippopotamus, Elliott the giraffe, Eric the Lion, Rusty the bear and Grier the alligator. Next, there were seven seals. The seventh

mouse crept up with the seals. The last seal was smiling at the mouse. The seal's name is Terrance. There were seven animals on the train, there was one elephant, two hippopotamus', three giraffes, four lions, five bears, six alligators, and seven seals. Next there were eight monkeys. The eight mouse tried to get on the other side but he got caught. The monkeys were having fun swinging on the monkey bars. The mouse tried to swing but he fell off. Then there were eight animals on the train. They were one elephant, two hippos, three giraffes, four lions, five bears, six alligators, seven seals and eight monkeys. They all went to the circus and lived happily ever after.

Early

Student No. 16

Based on the Book
The Winner, by Kjell Ringi

Once there were two men. One man went away. The men came back with a black hat, cane, glasses and a moustache.

The other man went away. He came back with a red hat and a flag.

The first man went away and came back on a bike.

The other man went away. He came back on a pink horse.

The first man went away. He came back with a fire breathing dragon. The dragon ate the first man then he ate the other man.

Later

Student No. 16

Based on the Book
A Boy A Dog and A Frog, by Mercer Mayer

Once there was a little boy named Richard and his dog Rover. They went down to catch a frog one day. But that day everything seemed to go wrong. The boy looked through a tree that looked like a sling shot. So he ran down the hill to try to catch a frog. And a tree tripped him. The frog said, "Oh my gosh rhibit, rhibit." Then Richard fell in head first (splash). His dog Rover went Bow-wow-wow (splash). The frog was like Richard. Everything seemed to go wrong. Richard tried to catch the frog but he said, "Hey, who turned out the lights?" His dog Rover said, "Goody, goody, goody--woof, woof." The frog was on a log that had fallen in one year ago. Richard got on one side. His dog got on the other side. They walked and walked and walked. Richard had him in his sight but his dog went woof, woof, woof. The frog said, "No, no, no don't eat." Richard just then slammed the net on Rover's nose and caught Rover instead of the frog. The frog went head first (splash) and made Richard jump a two feet in the air. Richard said, "That was a fine thing to do we missed the frog." He said, "Frog I'll be back to get you next time." This is what he said when he was singing. "Oh my gosh everything began wrong, oh my gosh everything came wrong today. I missed a frog and fell in. My Rover

dog got caught. Oh my gosh everything got wrong today." After he got through singing that, the frog went rhibit, rhibit. So he had to do something. Then he found that every boy is not like Richard. So the frog followed the footprints to the house. It had some dog prints too. He followed the footprints into the house. Then he found the net. He goes, "rhibit, rhibit, rhibit, the net." And he followed the track all the way to the bathroom. And the frog said, "rhibit, rhibit, rhibit. I found him." There's my buddy now. There's my buddy now." And they got in the bathtub together. The frog goes "rhibit," (splash) into the bathtub. They were all good friends together.

Early

Student No. 13

Based on the Book
The Adventures of Paddy Pork, by John Goodall

One day Paddy and his mother were shopping and Paddy saw a circus parade. Oh how he wanted to go.

While his mother was buying things he followed the circus. He got to a crossing. He got confused. He got lost. A big fox was looking at him. "May I help you," said the fox. "No," said Paddy. "Well come into my house," said the fox.

When Paddy went to sleep the fox tried to eat him. Paddy woke up and ran out the door. He ran and ran and ran.

He saw the circus. He tried to do tricks but he could not. He went to a tree and cried. "I will go home," he said. "Mother," Paddy said, " I will not leave again."

Later

Student No. 13

Based on the Book
The Damp and Daffy Doings of A Daring Pirate Ship,
by Guillermo Mordello

Once upon a time some pirates lived in this big old town and they were going to go out sailing. They did.

There were some more in another town. They were going to go out too. They got their boat and carried it to the water and they got in. The other team went off and they shoved their boat off too. They went out in the middle of the ocean. It was green yellow. The water was brownish-blue. You could see the pirate ships real good.

The good ship had a bird and a king's flag on it. The bad ship had a skeleton. They left trails because they were going to fast. They were shooting at each other. A big old dragon was at the bottom of the sea. A big old ball came down but it didn't hurt him. He was just lying on the bottom. Then they shot the good ship and blew them up and they won. Then they put their fingers on their noses and started waving bluvh, bluvh, bluvh. We won, we won. They said, Ooah, Ooah. They all had black eyes. They were happy. They said, eh-hee-hee we won.

The big dragon came up and he made such big waves that they went up in the air. And they all fell whoo-al. And he died and went to the bottom and said, "I'm dead, I'm dead."

The boat went to an island. They were tired and they all sat down. They went down in the bottom of the island. It had gold down there. They had robbed a bank. They were all counting it. They were all happy. They had diamonds, gold, silver, lots of money. They anchored down and went off and they had the thing down so no water could get in. Then a flood came.

They took all their things off of the island. Then they loaded the ship. The ship was so full, it started sinking. They started going, "Bluubh, bluubh."

They all went back to land. They were sitting up there thinking about that precious money down there, just free. Nobody could get it. The fish came by and said, "Ooh, look at all this money." A starfish nearly got hit on the head. It went bunk.

They were sitting up there thinking what to do. They were sitting up there looking for the money. So they decided let's make a ship and go back home. So they did. They started hammering (took, took, took). The trees that were on the island they cut them down and used them for a boat. Hand me the hammer (tap, tap, tap). Hand me the saw (swoosh-swooh-swooh) (took-took-took). I hurt my finger.

They sailed off and they went back home after they made their boat but they had a few bruised fingers. They went back home and they put a bandage on them.

Early

Student No. 2

Based on the Film
"The Fence"

The rain came down and then he began to build a home and a fence. Then he threw a rock. Then the police siren started. Then the flowers came.

Later

Student No. 2

Based on the Film
"Chromophobia"

They're shooting words. They are marching. They're scaring a girl away. They were shooting a butterfly. They're smoking. They're looking at TV. A baby was crying. They're building towns. They're shooting the town up. He is painting. They are marching by the painting. They are making monsters. They are sad. The army men are coming down. They are building a tower. They are playing checkers. She is watering the flower. The bird is coming out. They are shooting the moon. The flower turns into a redman. They are fighting. He is flashing the light. He is making something. He is playing a flute. He is sad. He is swinging. He turned back into a flower. They are growing. The army men fell down. They are electrocuting the army men.

He put a bomb in the back of his shirt. They blew him up.
 She is putting water on the men. They are falling down.
 The balloons are coming down. They are busting the balloons.
 The girl is flying. A girl is watering a flower.

Early

Student No. 7

Based on the Film
 "A Man and a Flower"

He went and watered his flower. He built a house
 and a gate. He threw his garbage over the fence and it
 came back over the fence. It hit the flower. He grew an-
 other flower. He threw it over the fence and got it back
 with a lot of flowers.

Later

Student No. 7

Based on the Film
 "A Friend"

Two little boys were running down the sidewalk to-
 gether. They wanted something but they didn't know what
 they wanted. They saw a little girl with a doll. They
 ran and grabbed the doll out of her hand. They ran with
 it. They dropped it in the road. She cried. One boy
 stopped and thought. The other boy fixed it with glue at
 the store. Then the other boy comes back to the girl. One
 of the boys pulled up his pants and got his bandaid off his
 leg. He puts it on the doll. She kissed both of them.
 Then the boys went. She went with them. They held hands

and went down the sidewalk together. They play with each other. They ran to her house. She said, "Want to come in." They said, "Sure."

Early

Student No. 10

Based on the Book
Snail Where Are You, by Tomi Ungerer

Once upon a time there was a man blowing a big snail toot to-toot toot.

Then he got his boat and sailed through the ocean to seek out new land. -sh-kssh-.

Then a little man was singing a song to welcome them in. He had curly shoes and purple socks.

A dog was playing the guitar. They were having a party, a dog and a pig.

Two mountain goats were hollering up in the air garf-garf-garf.

A cat was after the parrot and the parrot said, "Auk-auk." Then the man took the cat away. Then the parrot said, "Polly wants a cracker, Polly wants a cracker auk-auk, Polly wants a craker auk." Then the man gave him a cracker.

A man was playing a violin at the party. Tot ta Toot ta Totty, toot, tooty, toot ta toot.

Then a boy was blowing a thing at the party. Oh oh it won't squeak.

Then an owl was up in the tree in the dark. It was scary too. He was up in the tree hollering "What to do, what to do."

Then an elephant with big horns came running after him. And the own hollered at him. Wa Wa Was. So the elephant turned away.

Then a man pushed a lady on the ice. The lady was hollering, "Hey look out wa slow down man." Then the lady got up she was spinning around.

Then a snail called his friend, Here Jake, Here Jake.

Later

Student No. 10

Based on the Book
Journey to the Moon, by Eric Fuchs

Once upon a time there was a rocket ready to launch. There was a whole crowd of people standing around it. The man in the tower began to count; 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0 ignition blast off plsh-----
plsh-----. All the poeple were jumping up and down to see the men blast off. The astronauts were taking off. They were zooming through the air and taking off very quietly and loud.

Stage two began to drop. The two little doors popped out and the lunar module came out. Then the other ship took off. The ship carried it around the moon, back on top of the moon. Then the lunar module was landing.

Two men were firing it. They had to be careful so they didn't land in one of those craters. Then they were landing. Both men thought to each other Apollo Two, Apollo Two, you're right on schedule. This is Appollo Two, we read you loud and clear. What is your ignition. 476 477. Ignition team ready to land. Land psh, psh. "Whu--that was a hard landing." Then the men found a rock. The man was swinging the rock around. "Hey man what are you doing with the rock. You'll hit me in the head watch it. I'll fight with you if you keep on acting crazy." "O.K. I won't act crazy."

I'll put the flag out. You set the camera. Hey what do you call that thing, the man said. It's a tape computer. It goes in our ship department. O.K. Let's go walking. Wait, we forgot--O.K. We forgot, we forgot, shut up. O.K. now what is it. We forgot the car. We'll go check this hole out. "O.K. let's go." Vr-om Vroom splsh-----plash-----"Oh no, guess what." "Don't tell me. Don't tell me." "The fuse is broken." "That's what I thought you'd say."

Then they fixed the fuse. They were leaving the moon. 10, 9, 8, 7, 6, 5, 4, psh,-----"Hey you silly thing you forgot to count to 3, 2, 1. Forget it now. At least we're still on target."

Head for earth. "Hey here comes the other man." "O.K. Stop this thing." All three men were in the ship.

"You'd better lay down before you bump your head because we're fixing to land in the water." "O.K. Splash." "Hey look out--Hey man I can't control this contraption. Hey watch out, you punched the wrong parachute, we're hitting in the water."

Early

Student No. 19

Written Language Samples Based on the Film
"The Fence"

Once upon a time there was a man watering a flower. The flower grew taller than the man. The man was cleaning the house. Then the dog barked at the man. The man had to clean up. Then he threw the dirt over the fence. Someone was throwing trash back at the man. Trash was flying all around. The trash was stuck up in a pile. Then he watered the flower again. He made a fence around the house. The flowers were flying over the fence and that was the end.

Later

Student No. 19

Based on the Film
"Perception the City"

Once there was a carpet. The carpet was brown with a yellow mark through the middle on the ground, there were all kinds of letters and equal marks. There was a carpet with straight white mark through the middle. There were about ninety-eight of short, white, straight lines. There was a tall building about twenty-three feet high. The

building had many buildings. There was a walk that people could walk on to see the building. There were many steps going up to the building. There were many lights on in this other building. There was a lot of traffic below the buildings. There were one, two, three, four, five, six and more straight stairs going up the building. The men started marking something but they quit. There were three other buildings next to the tall one. There was a statue above the tall building. There were two signs near the building. The sign was yellow with black lines through it. There was a stop sign. The lights were red and green. The light was on green. There was a yellow sign that tells when men are working. There was a car light and a red light. There was a Volkswagen hubcap wheel. There were seven balloons. There were straight lines, dotted. Some had stars on them. There were bigger balloons shown. The people were at the fair. They bought many helium balloons. There were many people there. The people put transcars in the middle of the road. There was a boy in the middle of the road. He's lucky that a car wasn't coming. There was a box that was painted different colors. The boy was lying on something. He was at the beach playing and jumping. The boy was in the road. There were many signs in the road. The colors are pretty. One of the pictures is a fire engine.

Early

Student No. 16

Based on the Film
"Megalopolis"

The ball rolled on the ground. The ball made a house. The ball made a pyramid. The ball made a monument. The ball made a tower of Pisa. The ball made a city. The ball made all sorts of things. The ball was gone. The city began to fall.

Later

Student No. 16

Based on the Film
"The City"

Once there was a painter. He spilt paint. The paing had to go down in a manhole. Then he got another job cleaning windows for the city. He had to climb a building 700 feet high. When he was at the top he saw an 800 foot high building. He got down from working. He got out his lunch and saw a clock tower. The tower had wood holding it up. He had to work on it too. He said, "It is about to fall and a man is inside." The building fell. Then the man went on. The street light said stop. My friend collected hubcaps. He bought balloons for children. One was polka dotted and white. My friend saw a policeman. He was looking at his painting. He painted paint on the wall. He has painted a wall and a rail. The people have covered up his painting with newspaper. People have torn down his painting. People painted on his paint-

ing with yellow paint. There was a trash can named Hood
a lights were hanging over it. It had a coke on it. It
said Hello Dolly and Todd.

Early

Student No. 13

Based on the Film
"The Fence"

One day a man was standing outside. Hey! Hey!
I can plant a flower and I wish for a shower.

Later

Student No. 13

Based on the Film
"The City"

The boy painted on some ice cream. Letters were
on a wall. DWS was on it. A town had a big building
which was tall in the sky. People were at work. I looked
up and a little building wasn't high, it was flat. We went
to the shops. I saw a clock store. We went up some stairs
that went zig-zag. I ate some cookies. At night the town
was blue and prettier. A little bit of light was on.

The sun came up. The stoplight came on. Cars
stopped and went. Men at work were working. A VW went by.
The hubcaps were gold. They went to the zoo. Balloons
were everywhere. People had more things. Then they could
not hold it. A boy went to the box ride. C.K. was on a
truck. F.D. is fire. A lock locked up room 77. A house
was painted red with a side rail. A glass made the trees

look pretty. An old man and a woman talked to each other. A window was broken. Peace signs and love were there. A paint top was open. Walk! tight side! Fascination!

Early

Student No. 2

Based on the Film
"Megalopolis"

A clay word and a tent on a pencil were there. A white house and a Pisa and a castle were there. A house and a town and a building fell down.

Later

Student No. 2

Based on the Film
"A Tale for Everybody"

They were fighting. Then they saw an egg. Then one of them got on the egg. The egg turned into a car. Then it turned into a house. The egg broke open. The chicken came out. Then he ate one. Then he ate the other one. Then he went away running up the hill.

Early

Student No. 7

Based on the Film
"The Fence A Man and A Flower"

He went and watered his flower. And he built him a house and a gate. He threw his garbage over the fence. And it came back over the fence and hit the flower. And he grew another flower and another house. And he threw it over the fence. And got it back with a lot of flowers.

Later

Student No. 7

Based on the Film
"A Tale for Everybody"

There was some little bugs dancing around and laughing out chasing each other. They saw something big. They danced around the big thing. One of the bugs got on the big thing. They both got on, pushed each other down on the big thing. They thought it was a car. They said "No, it couldn't go." One of the bugs said it looked like a house. They fought. A bird comes out of the big thing. They fell down then the bird ate the bugs. The bird flew away.

Early

Student No. 10

Based on the Film
"The Swimming Hole"

Once upon a time a boy was fishing. He went to sleep and a fish ate the worm. Then he got in the water. Then he built a dam. While he was building it he fell in the water. Then he saw the bird nest. Then he looked out and saw a fish dying.

Later

Student No. 10

Based on the Film
"The Sea"

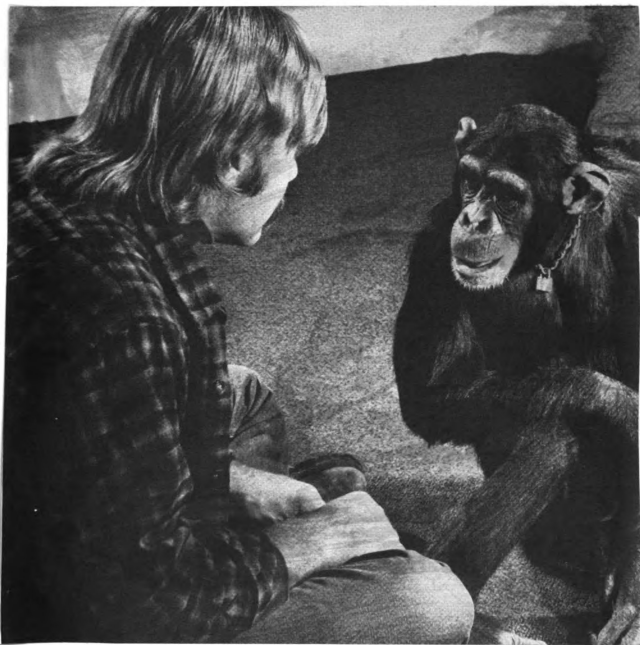
Once upon a time there were seven birds sitting on a fence. There was a big hill with leaves. There is the

sea, so blue and pretty and foggy. The people couldn't see out of the ship. It was almost daylight. Then there was a water fall. It was pretty coming down. A big wave hit a big rock and it looked ugly. The rocks were big and tiny. A water fall came along, the big rock was out of the way. There was some foam and it was, I hate to say. Then a water fall came again. A big rock is in the way of a wave. That has some rocks and it's ugly too. A big rock was in front of the wave. It looks like a map and is coming toward me. The cocoanut tree was big and looks like a big one, a big machine. The rock was on the sand.

APPENDIX C

APPENDIX C

SAMPLE OF PICTURES USED IN THIS STUDY

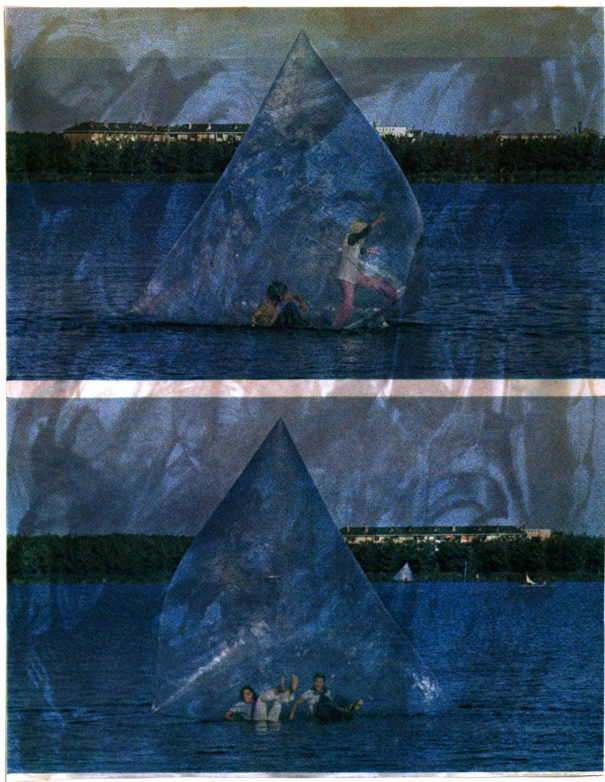


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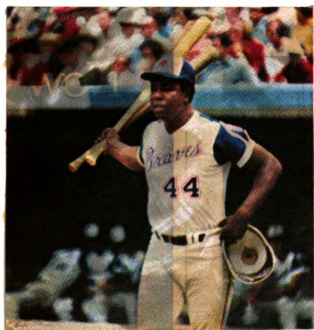
100

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APPENDIX D

AUBURN READING ATTITUDE SCALE (ARAS)

NAME _____ AGE _____ BOY () OR GIRL ()

ANSWER KEYS:



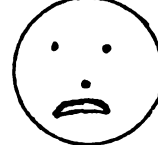
Yes! Yes!



Yes, Maybe

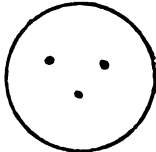


Maybe No

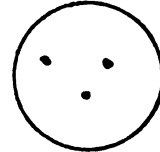


No! No!

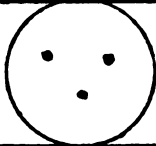
1. Books and magazines should be read only for school work.



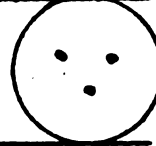
8. Reading is a pain.



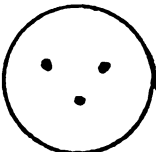
2. I wish I had more books at home.



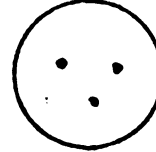
9. Reading gets boring after a few minutes.



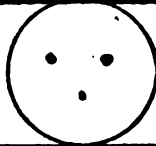
3. I hate to hear kids talk about books they have read.



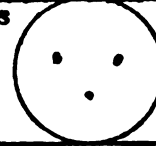
10. I skip reading if I can.



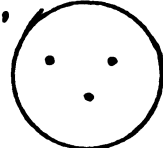
4. Reading is only for smart kids.



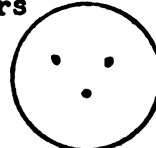
11. I like to get books as presents.



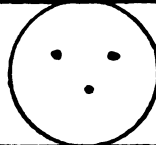
5. My family reads books, magazines, and newspapers.



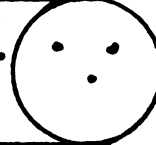
12. Books and newspapers bore me.



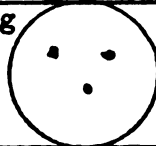
6. I like for my parents to read to me.



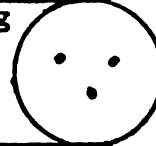
13. I wish I could choose what I read at school.



7. Reading is for learning but not for fun.

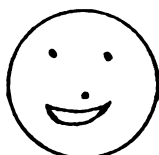


14. I do not enjoy reading newspapers.

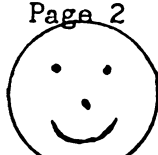


by Nolan Hatcher & Jone Wright, 1973.

ANSWERS KSYS:



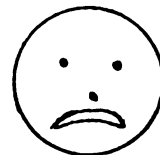
Yes! Yes!



Yes, Maybe

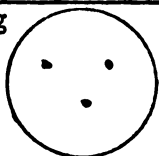


Maybe No

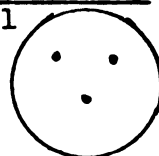


No! No!

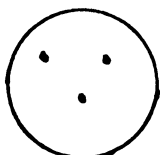
15. I don't get anything out of reading.



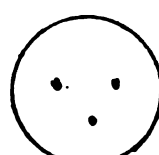
22. When I read, I feel happy.



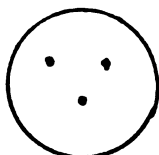
16. Reading turns me on.



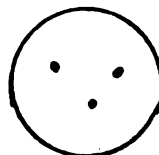
23. Most books are too long and hard to finish.



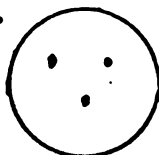
17. Books and magazines keep me from getting lonely.



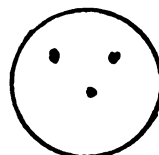
24. I often tell others what I read.



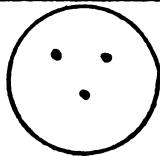
18. Magazines are a drag.



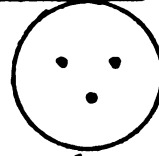
25. I like to read some stories over and over.



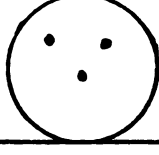
19. I waste money when I buy books.



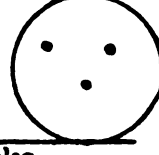
26. Reading is a hobby for me.



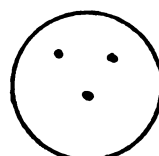
20. I read a lot at home.



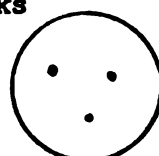
27. My family likes to hear me read.



21. Reading newspapers is fun.



28. Reading library books doesn't teach me anything.



*Have you drawn a mouth in every face?

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BIBLIOGRAPHY

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