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The Effectiveness of Language Arts and Basic Reader Approaches to First Grade Reading Instruction--Extended into Third Grade. Final Report.

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A comparison of the effects of a Language Arts Approach and a Basic Reader Approach when extended from grades 1 and 2 and applied in 22 third-grade classrooms is presented. The Language Arts or Language Experience Approach utilized children's oral language facility and experiences and their creative writing facility in the development of reading vocabulary, word attack skills, and written communication skills. The Basic Reader Approach utilized basic readers, studybooks, and teacher's manuals to develop reading vocabulary, word attack skills, and comprehension. Related research was surveyed. Conclusions of the study included: (1) while group tests did not discriminate between the two treatment groups, individually administered tests showed a superior performance by the Language Arts Approach students on word recognition tests and oral reading proficiency; (2) the writings of students in the Language Arts showed the correct use of more words; (3) the children in the Language Arts Approach were more eager to read and made more mature reading choices; and (4) the Basic Reader group was superior only on the Arithmetic Computation subtest. A bibliography of sources consulted and a listing of tests used are included. (JB)

THE EFFECTIVENESS OF LANGUAGE ARTS AND BASIC READER APPROACHES TO FIRST GRADE READING INSTRUCTION -- EXTENDED INTO THIRD GRADE

COOPERATIVE RESEARCH PROJECT NO. 3276

FINAL REPORT

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NEWARK, DELAWARE

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CHAPTER I

PROBLEM

The purpose of this study was to test the hypothesis that there is no significant difference between the effects of two methods of primary reading instruction when extended and applied at the third grade levels. The two methods compared were the Language Arts Approach and a Basic Reader Approach.

The Language Arts or Language-Experience Approach utilized children's oral language facility and experiences and their creative writing facility to develop a reading vocabulary, word attack skills and written communication skills. Group type reading instruction using basal readers as a principal source of materials was used to develop reading-thinking skills. Individualized reading based on the self-selection of materials by children with the library as a principal source was done to develop pupil interests and tastes and to teach the skills of selecting and sharing materials.

The Basic Reader Approach utilized basic readers, studybooks and teacher's manuals designed to develop and maintain a reading vocabulary, word attack skills and comprehension at the third grade level.

CHAPTER II

OBJECTIVES

The general objective of this study was to determine the effects of two methods of reading instruction on third grade children. The hypothesis was stated as: There is no significant difference between the effects and outcomes of the language arts approach and the basic reader approach when applied and extended at the third grade level; and, there is no significant difference between the effects of the two approaches when the two populations are compared on the basis of sex.

The following specific questions were posed:

(1) Will there be a significant difference in intelligence as measured by the Kuhlmann-Anderson Intelligence Test in September of the experimental year?

(2) Will there be a significant difference between the performance of the two treatment groups as measured by the Gates Advanced Primary Reading Tests in September of the experimental year?

(3) Will there be a significant difference between the performance of the boys and the girls of the two treatment groups as well as within the treatment groups as measured by the Gates Advanced Primary Reading Tests?

(4) Will there be a significant difference in writing mechanics, spelling, number of running words, number of different words, and number of polysyllabic words used between a random sample population of the two treatment groups on a measure of written language in September of the third grade year?

(5) Will there be a significant difference in the originality, interest, and story consistency in the creative writing sample between a random sample population of the two treatment groups in September of the experimental year?

(6) Will there be a significant difference in attitude toward reading as measured by a Reading Attitude Inventory in May of the experimental year?

(7) Will there be a significant difference between the performance of the two treatment groups as measured by the Stanford Achievement Test, Primary II, in May of the experimental year?

(8) Will there be a significant difference between the performance of the boys and the girls of the two treatment groups as measured by the Stanford Achievement Test, Primary II?

(9) Will there be a significant difference in eagerness to read and maturity of reading choices between the two treatment groups as measured by an Eagerness to Read Scale and a Maturity of Choice Scale?

(10) Will there be a significant difference between the oral reading performance of a random sample population from the two treatment groups in May of the experimental year?

(11) Will there be a significant difference between the word recognition ability of a random sample population from the two treatment groups in May of the experimental year?

(12) Will there be a significant difference in writing mechanics, spelling, number of running words, number of different words, and number of polysyllabic words used between a random sample population of the two treatment groups on a measure of written language in May of the experimental year?

(13) Will there be a significant difference in the originality, interest, and story consistency in the creative writing sample between a random sample population of the two treatment groups in May of the experimental year?

(14) Will there be a significant difference in reading achievement between the two treatment groups in May of the experimental year when the Gates Advanced Primary Reading Tests administered in September of the experimental year are held constant?

(15) Will there be a significant difference in reading achievement between the two treatment groups in May of the experimental year when the Stanford Achievement Tests administered the previous May in second grade are held constant?

CHAPTER III

RELATED RESEARCH

Studies in reading specifically directed toward discovering a best approach to beginning reading instruction were initiated in the 1930's. In 1963, Chall,[1] principal investigator of the City College-Carnegie Reading Study, reported some preliminary impressions and evaluations of the thousands of existent beginning reading research projects. Chall maintained that there were practically no comparative methods studies that would meet strict experimental criteria.

At the close of a five year investigation, Van Allen[2] reported his findings when children were taught by means of a basic reader approach, an individualized reading approach, and a language-experience approach. Pupils who were taught through the language-experience approach made as much or more progress in reading as measured by standardized tests than did children taught through individualized reading and basic reader approaches. The study included children representing a typical distribution of mental abilities.

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[1]Jeanne Chall, "Different Approaches to Beginning Reading," Reading as an Intellectual Activity, (J. Allen Figurel, Ed.). Newark, Delaware: The International Reading Association, 1963, pp. 250-254.

[2]Roach Van Allen, A Description of Three Approaches to the Teaching of Reading, Monograph No. 2. San Diego, California: Department of Education, San Diego County, 1962.

The adequacy of basal materials in teaching reading was investigated by Strickland.[3] A comparative analysis was made between the oral language patterns of 575 pupils in grades 1 - 6 and language patterns found in basic readers. Strickland concluded that pupils' oral language patterns are much more varied than patterns found in basic readers even though some congruence between speech patterns and reading materials is desirable. The language arts or language-experience approach does lend itself to the desired congruence.

In 1964, twenty-seven studies of beginning reading instruction were sponsored by the U. S. Office of Education. The studies were initiated at various universities and educational centers throughout the country.

Hahn[4] studied three approaches to beginning reading instruction - ITA, Language Arts, and Basic Readers - in 12 school districts in Oakland County, Michigan. Analysis of variance results indicated that the ITA and the Language Arts Approach gave significantly higher scores on the Word Reading Test of the Stanford Achievement Battery. Language Arts and Basic Reader Approaches produced significantly better spellers.

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[3]Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children, Bulletin of the School of Education, Bloomington: Indiana University, 1962.

[4]Hahn, Harry T. "Three Approaches to Beginning Reading Instruction ITA, Language Arts and Basic Readers." The Reading Teacher. International Reading Association, Inc., Vol. 19, No. 8, May 1966, pp. 590-594.

Vilscek, Morgan, and Cleland[5] examined the effects and outcomes of the Coordinated Basal Language Arts Approach and the Integrated Experience Approach. The Coordinated Basal Language Arts Approach comprised all of the materials of the Scott-Foresman Listen, Speak, and Write language arts program, as well as the Multi-Ethnic Basal Reader Program. The pupils in the Integrated Experience Approach had significantly higher mean scores than pupils in the Coordinated Basal Language Arts Approach on Word Meaning, Paragraph Meaning, Vocabulary, and Word Study Skills in the Stanford Achievement Battery. Pupils in the Integrated Experience Approach also had significantly higher scores than pupils in the Coordinated Basal Language Arts Approach on the Gates and Karlsen Word Lists, and the Creative Writing Mechanics Ratio.

Kendrick[6] compared the effectiveness of the Experience Approach to the teaching of language arts with the Traditional Method of instruction. The so-called Traditional Method utilized a typical basal reader approach. Results indicate that the male pupils in the Traditional Approach achieved significantly higher scores on the Paragraph Meaning subtest of the Stanford Achievement Battery. Middle class females of the

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[5]Vilscek, Elaine; Morgan, Lorraine; and Cleland, Donald. "Coordinating and Integrating Language Arts Instruction in First Grade." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 31-37.

[6]Kendrick, William M. "A Comparative Study of Two First Grade Language Arts Programs." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 25-30.

Traditional Approach also achieved better than the middle class females of the Experience Approach on the Paragraph Meaning subtest. The pupils in the Experience Approach wrote significantly longer stories. The lower class males of the Experience Approach had a higher mean score on a measure of Interest in Reading.

Stauffer[7] compared the effectiveness of a Language Arts Approach to a Basic Reader Approach in first grade reading instruction. Full pretest and posttest analyses were made of 433 students in 20 first grade classrooms in 3 towns in Southern Delaware. The pretests and posttests used were those agreed upon by project directors. Results of the statistical analyses were as follows: On the Stanford Achievement battery the total experimental population using the Language Arts Approach earned significantly (.01 level) higher scores than the control population on Word Reading, Paragraph Meaning, and Spelling. The Control group did better (.01 level) on Arithmetic. Experimental group boys scored higher (.01 level) than the control boys on Word Reading and Paragraph Meaning. Control boys performed better in Arithmetic. Experimental group girls excelled on Word Reading, Paragraph Meaning, and Spelling. Control group girls excelled on Arithmetic. There were no differences between experimental and control groups in Attitude Toward Reading. The

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[7]Stauffer, Russell G. "The Effectiveness of Language Arts and Basic Reader Approaches to First Grade Reading Instruction." The Reading Teacher. International Reading Association, Inc., Vol. 20, No. 1, October 1966, pp. 18-24.

experimental population scored higher in tests of Oral Reading on Accuracy, but not on Rate. On three measures of Word Recognition Ability, the experimental random sample population scored higher than did control. The experimental random sample population was also superior on measures of Written Language, that is, Writing Mechanics, Spelling, and Total Number of Running Words. When readiness and intelligence were held constant, the Language Arts group scored significantly better on all measures except Word Study Skills in the Stanford Achievement Battery and on Rate of Oral Reading. In general, this study concludes that the Language Arts Approach is an effective method of first grade instruction.

The findings of recent research on beginning reading instruction are not conclusive. The findings of the studies in regard to a Language Arts or Language-Experience Approach to beginning reading instruction are in contradiction at times. This is due in good part to the fact that the instructional procedures for teaching the Language-Experience Approach are different between the various studies. Different populations were employed. In addition, the results reported at the end of the first grade year are short term effects. The effects of beginning reading instruction and the extension of a particular approach through the primary grades can best be evaluated over a longer period of time. A longitudinal study serves this purpose.

CHAPTER IV

PROCEDURES

The sample was comprised of 22 third grade classrooms in three towns in southern Delaware. Twelve classrooms used the Language Arts Approach and 10 classrooms used the Basic Reader Approach.

There were a total of 576 subjects in the two treatment populations. Of the 576 subjects, only 363 received full pretest and posttest analysis in first, second and third grades. This difference between the total population and subjects used in the study can be attributed to absenteeism and population mobility.

In the Experimental population there was a total of 311 subjects. Of the total, 157 were boys and 154 were girls. In the Control population there was a total of 265 subjects, 145 boys and 120 girls.

Teacher Population: There were 13 teachers teaching the Experimental classrooms and 10 teaching the Control classes. Two of the teachers in the Experimental population taught one-half day sessions only for the full school year. All teachers were women. Data reported here pertains to only one one-half day session teacher. Teachers in the Control population represented almost three times as many Mean number of years teaching experience as the teachers in the Experimental population.

Table 1

Mean Number of Years Teaching Experience

and Mean Number of Years Teaching Third Grade

	Number of Years Teaching Experience	Number of Years Teaching Third Grade
Experimental	8	4
Control	22	8

The range of teaching experience for the Experimental group was from 0 - 29 years. The range of teaching experience for the Control group was 7 - 45 years.

Table 2

Highest Academic Degree Held by Teacher

Description of Degree	Experimental Teachers	Control Teachers
Less than Bachelor's Degree	0	1
Bachelor's Degree	7	7
More than Bachelor's but less than Master's	4	1
Master's Degree	1	1
Master's Degree plus additional graduate work	0	0

All 12 of the Experimental teachers held Bachelor's Degrees. Nine of the Control teachers held Bachelor's Degrees and one held less than a Bachelor's Degree. Four of the Experimental group and one of the Control group held more than a Bachelor's but less than a Master's Degree. There was one teacher in both the Experimental and Control groups who held Master's Degrees. All teachers held Standard Certificates as

specified by the Department of Public Instruction in the State of Delaware.

The mean age of the teachers in the Experimental population was approximately 34 years and the Control population was 52 years. The youngest teacher was 22 years of age, the oldest was 64 years of age.

Population Description: The Experimental group was located in the Seaford Special School District. The town of Seaford is in a rural setting with a population of approximately 5,000. The chief occupations are agriculture and the production of nylon and other synthetic materials at a local duPont industrial plant. The median family income based on the 1960 census was $6,459 for the total population. The median family income for the non-white population was $2,957. The median educational level for the total population was 12.1 years. The median educational level for the non-white population was 7.3 years.

The Control classes were located in the Georgetown and Harrington Special School Districts. Georgetown is the county seat of Sussex County. It is a town of approximately 2,500 people, located about 20 miles east of Seaford. The main sources of income are agriculture, positions in county government and employment at the duPont Nylon plant in Seaford. The median income level based on the 1960 census for Sussex County was $5,585. The median educational level was 10.1 years. There were no non-white children attending the Georgetown school in which this research was conducted.

Harrington is a small town in a rural setting with a population of approximately 3,000 people located about 20 miles south of Dover, the state capital, and about 20 miles north of Seaford. Many Harrington residents are employed by different departments in the state government. Two other sources of income are agriculture and employment at the duPont Nylon plant at Seaford. The median income level based on the 1960 census for Kent County was $5,391. The median educational level was 10.7 years.

Each town is within 20 miles distance of either of the other towns. Harrington lying north of Seaford and Georgetown is just across the county line in Kent County.

In Seaford, the location of the Experimental population, all third grade classrooms or a total of 12 were used as a part of the study. The five classrooms in Georgetown and five in Harrington constituted the Control population.

INSTRUCTIONAL PROCEDURES

The Language Arts Approach to reading instruction is concerned with the four basic communication skills: Listening, Speaking, Reading and Writing. A well-balanced instructional program is likely to teach these communication skills most effectively.

The third grade teachers alternated group instruction using basal readers and individualized instruction using the library on a monthly basis. Individualized instruction was used during the month of September when the children read and shared materials obtained in the library. This first month of individualized instruction or self-selection gave the teachers many unique opportunities to observe the reading and writing performances of their children. Consequently, the teachers were better able to identify instructional reading levels for the organization of reading groups in October.

In third grade the Directed Reading-Thinking Activity Group-Type was used primarily as a technique for teaching critical thinking and comprehension skills. The DRTA individualized-type was used primarily in order to teach the important skills of selecting, reading and sharing. Creative writing was an integral part of the total instructional program but particularly of the individualized reading phase. Throughout the entire year it gave the student the opportunity to communicate through written language. In addition, perceptual and semantic word recognition training was provided throughout to help the reader with the skills needed to deal with new words. This was done in both the group and individualized reading sessions.

Spelling was taught as part of the Language Arts program. Functional spelling was accomplished by each creative writing experience. Dictated spelling lists were used starting in October and continued throughout the school year.

During the month when basal readers were used children were placed in groups for Directed Reading-Thinking Activities (see Appendix D). They were grouped for instruction on the basis of informal tests and teacher judgment and placed at or near their instructional levels. The pupils in a group used the same basic reader at the same time under teacher direction. Each classroom had at least three and sometimes four instructional groups. It was not necessary for the teacher to meet with each reading group for a DRTA each day of the week.

In the group Directed Reading-Thinking Activities emphasis was placed on pupil purpose setting, reading to find answers to support or reject pupil conjectures, oral reading to prove answers and problem or plot solving type reading. Pupil-declared purposes reflected the experiential background, interests, intellectual maturity and language facility of each child. The information provided by the story gave each child an opportunity to reason, hypothesize, and evaluate. Rejecting or accepting of hypotheses or educated guesses rested with the pupils under teacher direction. The emphasis in the Directed Reading-Thinking Activity was on pupil participation and discovery.

Word recognition demands did not pose a problem for the children when reading the basal readers. Teaching emphasis was on the cognitive skills and on concept development and vocabulary development in follow-up activities.

Studybook activities were seldom used but when they were this was done primarily during the group-instruction month. The exercises in the studybooks were used highly selectively depending upon individual and/or group needs. Children were required to read on their own the directions to a studybook skill activity. The purpose of this procedure was to develop self-reliant work-study habits. Each student was required to know why he was doing a particular studybook exercise.

A completed studybook exercise was examined by the teacher. If mistakes occurred, the child was told how many mistakes he had made and then required to find and correct his mistakes. This procedure of immediate feedback or self-correction helped the child discover his error and to profit thereby. At the same time, it gave the classroom teacher immediate appraisal concerning certain skill efficiencies of a particular child.

In addition to the selective use of studybooks, the children received a minimum of 15 minutes per day of special instruction in word recognition. Not all children needed special training in the same word attack skills. Word recognition skills were taught on a whole class or group basis but largely on an individual basis. Children received training in auditory and visual discrimination, consonant and vowel substitutions, vowel sound and variability, derivative changes, syllabication and dictionary usage.

The children continued to read library and trade books during the group instruction months. However, the selecting of interest areas and the sharing of books was not done in the same comprehensive manner as

during the self-selection month. The children wrote creatively and continuously in both the self-selection months and the group months, but again there was more sharing accomplished during the self-selection months.

During the self-selection month the third grade students read widely from textbooks, trade books, magazines and newspapers. The central library was the major source of reading material. Third grade classes visited the library weekly. Each child could take out two or three books at a time. Children who finished the books selected or needed others before the next regularly scheduled classroom visit to the library were permitted to return to the library and select others.

Each room had a classroom library. Periodically teachers selected fifty or more books from the central library for use in the classroom. Magazines and newspapers were also available. The amount of reading material in a classroom library was further increased by private collections of books owned by students and by the classroom teacher. The town library of Seaford and the libraries of surrounding communities were used frequently and provided additional sources of reading material.

Children gained facility in the selecting of reading material at their interest level, their cognitive level and their reading level. The students learned to examine the contents of a book to determine whether or not it might interest them and to estimate its level of readability. When a book seemed too difficult children would put it aside. In some instances a child would select a book of high interest and readability to be read by an older brother, sister, or parent.

This selection procedure permitted a child to have new experiences and attain concepts in areas of special personal interest. It also permitted him to do research-type reading as he pursued his interest. In addition, listening to the reading of a book developed another important communication skill.

The children identified areas of interest in each individualized period. The children were free to work individually or in groups, to read and research a particular interest area. This was an area in which they wished to become more knowledgable and gain new insights. The subject of the interest areas ranged from areas in Science, Social Studies, Anthropology, Art, Music, Nature, Mechanical Interests and others. The key to the month of self-selection in a particular interest area was the planning and sharing sessions. The children developed projects to share with their fellow students concerning the interesting aspects about their particular area of interest.

In January, for instance, the last five school days were devoted to sharing sessions. Children shared within their classroom, with classrooms at other grade levels and between school buildings. This procedure permitted a rich opportunity for children to read and share information about their interest by using the communication skills of reading, writing, speaking and listening.

Teachers and students used different ways for sharing books. Many of the ideas suggested in Amy Elizabeth Jensen's Attracting Children To Books[8] were employed. Plays, puppet shows, and illustrations were

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[8]Jensen, Amy Elizabeth. "Attracting Children to Books," ELEMENTARY ENGLISH, October 1956, pp. 335-338.

popular ways of sharing.

When reading material selected in the library, a child used the word attack skills he had acquired during the group instruction. He could confer with a neighbor for help if necessary or refer to a dictionary. The teacher was also available. Because children chose books near their reading level and because children had learned a functional approach to word problems, the classroom teacher was not overburdened helping children with word recognition problems.

Children read other materials during the group instruction sessions and at any other time in the school day when they had a free moment. The reading atmosphere was informal. The children were permitted to find a comfortable spot in the room to read. Rocking chairs, high stools, and the like were available in most of the rooms. The library corner of the room was a popular place for reading. Others liked to sit under the Educational Television stand. The atmosphere was informally busy. Where pupils sat to read was not as important as the fact that they were reading.

One phase of the self-selection was the sharing of books individually with the teacher. The children read widely. Teachers were not expected to discuss with a child each book read. This would have been impossible. The teacher or a child might pick one book from a group of books the child had read recently and discuss the book together. This sharing was done selectively. The child might tell about the part of the book he enjoyed most, or the funniest part or the most exciting part and so on. He might volunteer to read a short excerpt from the book. In

this manner the teacher was able to determine how well the child fared conceptually with what he had read as well as how well he could read orally under such conditions.

A record was kept by each child of the materials he had read. Students used a 4 x 7 card. After reading a book or parts of a book, the student filled out a card. He recorded his name, the title of the book, the author, the number of pages in the book or magazine, the number of pages he had read, the date, and a short comment about what he had read. These cards were kept in the child's desk or filed in a central location where the child had ready access to them.

The children were not expected to read every book completely. Sometimes they read only a portion of special interest to them. On some occasions the reader found that he did not like the book or that the book was not suitable to his purpose. He then exercised the preogative of returning the book and selecting another. All he needed to do was to indicate on a card how many pages he had read and why he returned the book.

Teacher-pupil relationships developed in a respectful and cooperative way. A comfortable person-to-person relationship resulted in discussion and sharing rather than a police-type punitive checking.

The students wrote creatively throughout the school year. The emphasis was on content rather than writing mechanics. On occasion the stimulus for writing was presented to a group or to an entire class. On other occasions a child wrote about anything he wished. Frequently children wrote about a science experiment or a social studies project.

The children wrote freely. They were encouraged to spell the words as best they could. Spelling was not teacher corrected but many children initiated editorial corrections on their own. This editorial effort resulted from exchanging of stories and from rereading a story at a later date. A commendable spelling conscience resulted.

Creative writing was shared with classmates and teachers. Stories were exhibited around the room and in the school corridors. Teacher and pupil evaluation of the quality of the writing was done but a letter rating was not put on a paper. Spelling inaccuracies gave the teacher good insight into the word attack skill needs of a child. Children noted the mechanics of writing such as indentations, capitals, periods, and paragraphing and did so pretty much on their own. Writing became a natural extension of oral language usage and served practical ends.

Each child had a creative writing notebook. He was urged to write twice a week in this notebook. In addition much material was kept in file folders. Many of the writings were taken home.

Formal spelling instruction began in late October in the third grade. In September and October teachers administered lists of spelling words of increasing difficulty to arrive at an instructional spelling level for each student in a classroom. In some classrooms there were as many as six spelling groups.

The spelling approach used was a test-retest self-correction method. On Monday each group was administered a list of words. A teacher usually presented words to three or four groups at a time. Immediately after the presentation of the words, children were given a

list of the words. Using this list they would then note their mistakes, study the correct spelling and write the correct spelling alongside the misspelled words. This finding of mistakes and writing the correct spelling, required each child to carefully examine each word spelled correctly and each word missed. He then covered his correction and wrote the word a second time. The pupil followed this procedure with each misspelled word until he had spelled the word correctly three successive times.

On Wednesday the same list of words was administered again and the same self-correcting procedure was used. If a student got all the words correct on Monday and on Wednesday, he was finished with this kind of spelling for that week. Those students who missed words on either Monday or Wednesday took the same list of words on Friday.

Each student received approximately twenty words per week. The number used depended on the spelling level. Some groups received as few as ten words and other groups received as many as twenty-five words per week.

The spelling lists were presented by the teacher. The teacher pronounced the word once and students wrote it immediately. Words were not presented in a sentence. By eliminating the practice of presenting each word in a sentence, pupils could spell or write the word the moment they heard it. When a homonym was presented, the pupils needed to ask about which word was being used. As a result children were more attentive during the presentation of the words. Practice in careful listening was taking place.

The pupils were kept at their instructional level throughout the school year. This necessitated shifting some children up from one group to another. Usually the pupils needed to be placed at a higher spelling level. This was done very readily. This change of groups may have been due to the large amount of creative writing constantly going on in each classroom. Through this functional writing the children had numerous opportunities to apply their spelling skills.

As described then the instructional program attempted to balance group-type instruction in a basal reader with individualized instruction using a library. The extensive creative writing gave the children many opportunities to develop written communication skills. Systematic word attack training and the selective use of studybook exercises supplemented the program. Formal and informal spelling instruction was also a part of the program. Throughout third grade the emphasis was on the effective teaching of the communication skills along with a differentiation of instruction according to individual pupil needs and abilities.

The Control groups followed a Basic Reader Plan of primary reading instruction in third grade. Though different Basic Reader series may vary in their emphasis on particular aspects of beginning reading, the following procedure is indicative of the Basic Reader Approach at this level.

The Basic Reader program is structured in terms of grade level and book levels. Stated objectives of the Basal Reader program used in the Georgetown and Harrington schools were: (1) to promote reading comprehension, (2) to acquire facility in word study skills including

word meaning, word recognition, phonics, instructional analysis, (3) to promote good reading habits and attitudes, and, (4) to develop the language skills which the child needs to keep pace with his emotional development.

The Basal Reader population used the studybook in conjunction with their instructional program. In the Basal Reader program the children were grouped for teaching purposes. There were either two or three reading groups in each classroom. The Harrington school used the American Book Company[9] basal readers. The Ginn Basic Reader Series[10] was used as a supplemental basal reader for one of the groups in each classroom. The Georgetown teachers used the Ginn Basic Reader Series.

In both the Harrington and the Georgetown schools central library facilities were available.

The Control classrooms in the Harrington school used the classroom library as their major source of independent reading material. Third grade teachers selected books from the central library to be used in the classroom. There was no regular schedule of visits for third

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[9]Emmett A. Betts and Carolyn M. Welch, Betts Basic Readers, Third Edition, The Language Arts Series. American Book Company, New York, 1963.

[10]David H. Russell et al. The Ginn Basic Readers, Ginn and Company, Boston, 1961.

grade children, though the children did visit the central library individually or in a group upon teacher or pupil request.

The Control classrooms in the Georgetown school visited the central library every two weeks. The children selected books to be taken back to their classroom. In addition each third grade class had a classroom library.

DATA COLLECTED

Pretests: In September of the experimental year each subject in the two treatment groups was administered the Kuhlmann-Anderson Test, Form CD, and Gates Advanced Primary Reading Tests of Word Recognition and Paragraph Reading. A creative writing sample was also obtained from each child.

The Kuhlmann-Anderson Test, Seventh Edition, Revised 1964, is a group administered intelligence test. The test consists of eight sections designed to measure verbal and quantitative intelligence.

The Gates Advanced Primary Word Recognition Test is designed to sample the ability to read words representative of the primary vocabulary. It consists of 48 exercises, each of which contains four printed words on a picture illustrating the meaning of one of them. The 48 exercises are arranged in order of increasing difficulty. The time limit is 15 minutes.

The Advanced Primary Paragraph Reading Test consists of 24 paragraphs each accompanied by illustrations. The illustrations are prepared in such a way that one is representative of the meaning of the paragraph. The child is to mark the correct picture. Vocabulary and sentence structure of the test units increase gradually in complexity and difficulty. This test measures the ability to read primary grade passages and identify a picture representative of the content. Children are allowed 20 minutes to complete this test.

The creative writing sample was obtained in September. Children were encouraged to write for 20 minutes about anything they wished. No

spelling help was given. When pupils requested spelling assistance they were told to try to spell the words as best they could.

Posttests: The following instruments to measure achievement were administered in May of the experimental year: San Diego Reading Attitude Inventory; Stanford Achievement Test, Primary II, Form W; the Gilmore Oral Reading Test; Fry Test of Phonetically Regular Words Oral Reading Test; and, the Gates Word Pronunciation Test. In addition a Creative Writing Sample was obtained from each child.

The San Diego Reading Attitude Inventory and the Stanford Achievement Test were administered to each child in the study. The Gilmore, Fry, and Gates Tests were administered to a randomly selected population. Even though creative writing samples were obtained from all the children of both populations only the writings of those pupils identified for the randomly selected population were analyzed and compared.

The San Diego Reading Attitude Inventory is a questionnaire read orally by the examiner. The pupil circles a Yes or No response to each of 25 questions designed to measure what he usually thinks about reading.

The Stanford Achievement Test, Primary II consists of six subtests: Word Meaning, Paragraph Meaning, Science and Social Studies, Concepts, Spelling, Word Study Skills, Language, Arithmetic Computations, and Arithmetic Concepts.

The Word Meaning Test consists of 36 multiple choice items, graduated in difficulty, which measure the ability of a pupil to read a sentence and to select a correct word to complete the sentence.

The Paragraph Meaning Test consists of a series of paragraphs, graduated in difficulty, from each of which one or more words have been omitted. The child demonstrates his understanding of the paragraph by selecting from four choices that are afforded him the proper word for each omission.

The Science and Social Studies Concepts Test measures a pupil's vocabulary in science and social studies areas independent of his reading skill. The pupil is required to select from a series of three alternatives the proper response to a question or statement read by the teacher.

Spelling ability is measured by means of a 30-item dictation-type spelling test. In this test the word to be spelled is pronounced by the teacher, an illustrative sentence is read, and the word is repeated before the pupil writes the word in his test booklet.

The Word Study Skills Test is a 64-item test designed to measure auditory discrimination of sounds. In the first part of the test the teacher pronounces a key word and then also reads the words in the test item. The child listens and follows in his test booklet, marking the word having the same beginning or ending sound as the key word. In the second part of this subtest the pupil finds a word that matches a particular sound in a key word. In this section, the child reads the words without teacher help.

The Language Test is designed to measure the correct usage of Capitalization and Punctuation in 40 multiple-choice items. A second section is primarily concerned with verb and pronoun usage with some attention to errors between adverbs and adjectives, double negatives and

word choices (or diction). In this section the child is asked to indicate whether or not a sentence has been written correctly.

The Arithmetic Computation Test contains 60 free response items in addition, subtraction, multiplication, and division.

The Arithmetic Concepts Test is designed to measure the student's number knowledge and his ability to solve problems.

A random sample of subjects in each treatment group were individually administered the Gilmore Oral Reading Test, the Karlsen Phonemic Word Test, the Gates Word Pronunciation Test, and the Fry Phonetically Regular Words Oral Reading Test.

The Gilmore Oral Reading Test is an individually administered test of oral reading performance designed for use in grades one through eight. The test provides measures of accuracy of oral reading, comprehension of material read, and rate of oral reading. Only the accuracy of oral reading and rate of oral reading is reported in this study. Accuracy of oral reading is measured by recording such errors as substitutions, mispronunciations, inability to recognize words, disregarding of punctuation, insertions and additions, hesitations, repetitions, and omissions during the oral reading performance.

Rate of oral reading is measured by the time required to read orally selected paragraphs. Rate is computed on a wpm (words per minute) basis.

The test consists of 10 paragraphs of increasing difficulty and forming a continuous story. However each paragraph is a unified and self-sufficient narrative and is related to the other paragraphs by its

concern with the same characters. Each paragraph is accompanied by five comprehension questions. The examiner presents the paragraphs in numerical order until the pupil reaches the paragraph on which he makes 10 or more errors in his oral reading.

The Phonetically Regular Words Oral Reading Test is a list of 30 words arranged in two columns of 15 words each. Each pupil attempts the first column of 15 words. If two or more words are recognized from word number six on, the student attempts the second column. The score is the number of words pronounced correctly.

The Gates Word Pronunciation Test is a list of words ranged in order of increasing difficulty. The pupil reads the words until 10 consecutive words have been missed. The pupil is given one point for a correctly pronounced word on the first trial and one-half point for each word correctly pronounced on a second trial.

A writing sample from each pupil of the total population was obtained in September and again in May of the experimental year. The children were told to write about anything they wished to write about. No attempt was made to enrich normal classroom display. No spelling help was provided during the writing session. When pupils requested spelling assistance they were told to try to spell the words as best they could. Twenty minutes were allowed for the pupils to write their story.

The stories written in September and in May by a random sample drawn from the third grade population were corrected by two graduate students majoring in Reading at the University of Delaware.

A Mechanics Ratio Scale was obtained for each story in the random sample. The Mechanics Ratio Scale measured the correct use of capitalization,

punctuation, and paragraph indentations. The score was a percentage of correct usage over possible correct usage.

The Total Number of Words Spelled Correctly was recorded. To obtain this score, the number of words misspelled was subtracted from the total number of running words. A word incorrectly capitalized was recorded as a spelling error. The Total Number of Running Words for each story was also recorded.

In addition, the Total Number of Different Words used in the story and the Total Number of Different Words Spelled Correctly was recorded.

Four additional unique measures were obtained from the written samples. Each was judged for degree of creativity, originality and interest, and organizational structure. The analysis of originality, interest, and organization was made by the same two graduate students previously mentioned.

The fourth unique measure was an evaluation of handwriting for the stories written in May of the experimental year. The stories of the random sample population were evaluated on a five point scale. The rater for the handwriting did not participate in the previous ratings of the stories. This eliminated the possibility of the handwriting evaluation being biased by the originality, interest, and organization of the creative writing samples. In evaluating the creative stories, the raters did not know from which population the stories were drawn thus eliminating any possible bias.

RESEARCH CONTROLS

Preschool planning sessions were held in September. On Wednesday, September 7th, the project director and assistant met with the third grade teachers and building principals of the two participating schools in the Seaford Special School District. The Language-Experience Approach was reviewed by the project director. Emphasis was placed upon the procedures of grouping for instructional purposes, word recognition, self-selection, and creative writing. The project director reviewed the procedure for obtaining dictated experience stories. The use of a stimulus for motivating both dictated experience stories and creative writing was discussed. Diagnostic procedures useful in recognizing individual differences of the children were called to the teachers' attention.

On Tuesday, September 13th, the project assistant met with the building principal and third grade teachers of the Harrington Special School District. Basic Reader procedures were reviewed. The project assistant and the teachers examined the Basic Reader materials. Discussion of grouping the children for effective instruction followed.

The meeting with the third grade teachers of the Georgetown Special School District was held on Thursday, September 15th. The use of the Basic Reader plan was discussed. Some of the Georgetown third grade teachers had participated in a Language Arts Workshop the prior summer. They voiced concern about the fact that some of the techniques they had learned in the summer might go beyond the scope of the Basic Reader plan. The teachers were urged to follow the manuals of the Basal

Readers and if any difficulty arose, they should discuss the question with the project director or project assistant.

Frequent visits were made by the project director and the project assistant to the school participating in the study. The project director and/or the project assistant visited the Experimental schools on a weekly basis. The research assistant visited the Control schools approximately once a month during the experimental year. In addition to these visits the research assistant and his aides were present daily during the two week pretest sessions in September and the posttest sessions in May. The Seaford Special School District's Reading Consultant also visited with each teacher in the Experimental treatment group at least once a week throughout the school year. This represented a larger number of visits to third grade level teachers by the Reading Consultant than was typical of her duties other years. Half-day session meetings for the Experimental teachers were scheduled for the first Wednesday of each month.

These meetings were considered necessary because the Experimental teachers were not as familiar with the Language-Experience Approach as the Control teachers were with the Basal Reader Approach. These sessions gave the teachers an opportunity to air any concern they might have about specific teaching procedures. On occasion it was necessary for the project director or the assistant to demonstrate a particular teaching technique. In addition, the project director reviewed with the teachers his observations in the classroom. The teachers looked forward to these monthly meetings.

In each school the principals also made periodic visits. They were urged to note adjustment and progress and to give advice if requested. Of course they in turn were asked to keep the director and/or assistant informed about their observations. Usually the director, the assistant and principal had lunch together and reviewed the project and its progress. Occasionally the superintendent of the respective school districts joined them.

The cooperation of the different school administrative staffs was outstanding. They were constantly and intimately involved and gave unquestioning support. The superintendents merit a special word of commendation. They supported the study wholeheartedly and made frequent inquiries and visits.

In the Control schools, the only method for meeting with the teachers on a group basis was at lunch time get-togethers. At these times problems of the Basic Reader Approach were reviewed and professional advice was given as requested.

In addition each time the director or his assistant visited classrooms, short consultation sessions were held with the teacher involved. This was done in both the Experimental and the Control schools.

Teacher morale and interest in the project was excellent almost throughout. The rapport between all the teachers and the project director and his assistant was especially good. Teachers seemed at ease with both persons and posed questions and accepted suggestions in a professional manner. Teacher resourcefulness and creativity was encouraged throughout.

Classroom teachers administered some of the pretests and the posttests. Whenever they did so, they were supervised and aided either

by the project director, the research assistant, the school building principal or selected graduate students from the Reading Study Center at the University of Delaware. In each instance, teachers were schooled in test procedures through a study of the manuals prior to the testing.

CHAPTER V

ANALYSES OF DATA

In this chapter all the test results are reported. An account of the Mental Age findings based on the Kuhlmann-Anderson Test of Mental Ability is reported first. The remainder of this chapter reports results on the pretests and the posttests.

Statistical analyses were used to test the hypotheses declared (see pp. 2-5). Correlation matrices were generated for pretests and posttests with means and stardard deviations reported for each variable. F test of equality of variance, and t test of difference between means, with appropriate degrees of freedom under the assumption of equal variance, and t test of difference between means, with appropriate degrees of freedom under the assumption of unequal variances was computed.[11] Analysis of covariance was used where appropriate.[12] The computations were accomplished by means of Scientific Data System's (SDS9300) computer, located in the Computer Center on the campus of the University of Delaware, Newark, Delaware.

Problem I Will There Be A Significant Difference In Intelligence As Measured By The Kuhlmann-Anderson Intelligence Test In September Of The Experimental Year?

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[11] H. M. Walker and J. Lev, Statistical Inference, New York: Henry Holt and Company, 1953, pp. 156-158.

[12] B. J. Winer, Statistical Principles in Experimental Design, New York: McGraw-Hill, 1962.

Table 3

Means and Test of Significance of Kuhlmann-Anderson Mental Age Results of Boys, Girls, and Total Population of Experimental and Control Groups.

	EXPERIMENTAL		CONTROL					
	N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
Boys	85	54.12	79	52.09	2.03	.81	162	n.s.*
Girls	92	63.30	71	57.94	5.36	2.19	162	.02
Total	177	58.89	150	54.86	4.03	2.33	326	.02

*n.s. means no significance

There was no significant difference in Mental Age between boys of the two treatment groups. The Experimental girls had a significantly higher Mental Age than the Control girls. The total Experimental population had a significantly higher measured Mental Age than the total Control population.

Problem II Will There Be A Significant Difference Between The Performance Of The Two Treatment Groups As Measured By The Gates Advanced Primary Reading Tests In September Of The Experimental Year?

Table 4

Means and Test of Significance of Gates Advanced Primary Tests for Boys, Girls, and Total Population of Experimental and Control Groups.

	EXPERIMENTAL		CONTROL					
	N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
				Word Recognition				
Boys	85	28.15	79	28.52	- .37	.18	155	n.s.
Girls	92	32.90	71	30.89	2.01	1.29	161	n.s.
Total	177	30.62	150	29.64	.98	.76	323	n.s.
				Paragraph Reading				
Boys	85	19.85	79	19.29	.56	.45	162	n.s.
Girls	92	22.42	71	20.92	1.50	1.98	161	.05
Total	177	21.19	150	19.95	1.24	1.61	325	n.s.

Problem III Will There Be A Significant Difference Between The Performance Of The Boys And The Girls Of The Two Treatment Groups As Well As Within The Treatment Groups As Measured By The Gates Advanced Primary Reading Tests?

On the Word Recognition Test there was no significant difference between the boys or between the girls of the two treatment groups. Also, there was no significant difference between the total Experimental and the total Control population.

On the Paragraph Reading Test there was no significant difference between the boys of the two treatment groups. The Experimental girls attained a significantly higher score than the girls of the Control group. There was no significant difference in performance between the total Experimental and total Control population.

Problem IV Will There Be A Significant Difference In Writing Mechanics, Spelling, Number Of Running Words, Number Of Different Words, Number Of Words Spelled Correctly, And Number Of Polysyllabic Words Used Between A Random Sample Population Of The Two Treatment Groups On A Measure Of Written Language In September Of The Third Grade Year?

Table 5

Means and Test of Significance of Writing Mechanics as Measured by the Grade Three Written Language Measures on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	73.2	30	60.5	12.7	2.41	58	.05

The total mechanics ratio scores were recorded in per cent. The results indicate that the Experimental sample achieved significantly higher on a test of the mechanics of writing than the Control sample.

Table 6

Means and Test of Significance of Number of Running Words as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	73.7	30	47.8	25.9	4.04	58	.01

The results indicate that the random sample group of the Experimental population wrote significantly longer stories than the random sample of the Control population.

Table 7

Means and Test of Significance of Number of Different Words as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	29.7	30	44.9	15.2	3.85	58	.01

Results indicate that the random sample drawn from the Experimental population used a significantly greater number of different words in their written language than did the random sample group of the Control population.

Table 8

Means and Test of Significance of Number of Words Spelled Correctly as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	65.8	30	43.2	22.6	5.02	58	.01

Results indicate that the random Experimental group spelled a significantly greater number of words correctly than did the random sample Control group.

Table 9

Means and Test of Significance of Number of Polysyllabic Words in the Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	13.4	30	5.7	7.7	3.48	58	.01

Results indicate that the Experimental random sample group used significantly more polysyllabic words in their writing than the random sample from the Control population.

Problem V Will There Be A Significant Difference In The Originality, Interest, And Story Consistency In The Creative Writing Sample Between A Random Sample Population Of The Two Treatment Groups In September Of The Experimental Year?

Table 10

Means and Test of Significance on Originality, Interests, and Story Consistency in the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
				Originality			
30	2.1	30	1.4	.7	1.98	58	.05
				Interest			
30	3.2	30	1.9	1.3	2.85	58	.01
				Consistency			
30	3.3	30	2.0	1.3	2.87	58	.01

Results indicate that the random sample group of the Experimental population achieved a significantly higher score on the Originality Scale, the Interest Scale, and the Consistency Scale than the random sample group of the Control population.

Posttest Results: The following instruments to measure achievement were administered in May of the experimental year, and in the following order: San Diego Reading Attitude Inventory, Stanford Achievement Test, Primary II, the Gilmore Oral Reading Test, Fry Test of Phonetically Regular Words, and the Gates Word Pronunciation Test. In addition, a Creative Writing Sample was obtained from each child.

Problem VI Will There Be A Significant Difference In Attitude Toward Reading As Measured By A Reading Attitude Inventory In May Of The Experimental Year?

Table 11

Means and Test of Significance of Attitude Toward Reading as Measured by the San Diego Reading Attitude Inventory for Boys, Girls, and Total Population of Experimental and Control Groups.

	EXPERIMENTAL		CONTROL					
	N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
Boys	85	19.88	79	20.14	-.26	-.41	162	n.s.
Girls	92	20.86	71	21.03	-.17	-.36	161	n.s.
Total	177	20.36	150	20.55	-.19	-.38	323	n.s.

Results indicate no significant difference in the attitude toward reading between the boys of the two populations or between the girls of the two populations. Neither was there a significant difference in the attitudes toward reading of the two total populations.

Problem VII Will There Be A Significant Difference Between The Performance Of The Two Treatment Groups As Measured By The Stanford Achievement Test, Primary II, In May Of The Experimental Year?

Table 12

Means and Test of Significance of Stanford Achievement Test, Primary II, for Boys, Girls, and Total Population of Experimental and Control Groups.

	EXPERIMENTAL		CONTROL					
	N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
Word Meaning								
Boys	85	24.11	79	22.70	1.41	1.29	158	n.s.
Girls	92	24.36	71	23.59	.77	.94	162	n.s.
Total	177	24.24	150	23.12	1.12	1.63	325	n.s.
Paragraph Meaning								
Boys	85	39.09	79	38.67	.42	.19	162	n.s.
Girls	92	42.48	71	41.62	.86	.55	159	n.s.
Total	177	40.85	150	40.07	.78	.57	323	n.s.
Science and Social Studies Concepts								
Boys	85	24.24	79	22.85	1.39	1.14	142	n.s.
Girls	92	23.20	71	20.75	2.45	2.76	161	.01
Total	177	23.70	150	21.85	1.85	2.41	290	.02
Spelling								
Boys	85	19.38	79	17.61	1.77	1.31	160	n.s.
Girls	92	23.61	71	19.69	3.92	3.63	161	.001
Total	177	21.58	150	18.59	2.99	3.41	327	.001

Table 12 (Continued)

Word Study Skills								
Boys	85	39.28	79	38.27	1.01	.47	162	n.s.
Girls	92	42.26	71	41.83	.43	.23	163	n.s.
Total	177	40.83	150	39.95	.88	.61	326	n.s.
Language								
Boys	85	44.77	79	43.61	1.16	.63	162	n.s.
Girls	92	50.07	71	47.55	2.52	1.43	161	n.s.
Total	177	47.52	150	45.47	2.05	1.58	325	n.s.
Arithmetic Computation								
Boys	85	37.34	79	41.95	-4.61	-2.34	162	.02
Girls	92	40.12	71	41.01	- .89	- .53	161	n.s.
Total	177	38.79	150	41.51	-2.72	-2.09	325	.05
Arithmetic Concepts								
Boys	85	29.69	79	30.52	- .83	- .44	156	n.s.
Girls	92	28.21	71	27.52	.69	.47	163	n.s.
Total	177	28.92	150	29.10	- .18	- .15	325	n.s.

In the Stanford Achievement Test, Reading Ability is measured by the tests of Word Meaning, Paragraph Meaning, and Word Study Skills. Arithmetic is measured by means of two tests - one in Computation and one in Concepts. Included in the battery is a test of Spelling, Language, and Social Studies and Science Concepts. The results will be discussed in the above categories.

Problem VII-A. Reading Abilities. Reading is measured by means of three subtests - Word Meaning, Paragraph Meaning, and Word Study Skills. Results

indicate that though the Experimental population achieved higher mean scores on all three subtests, the differences are not large enough to be statistically significant.

Problem VII-B. Spelling. Spelling is measured by means of a single dictation-type test. Results indicate that the Experimental population achieved significantly better than the Control population.

Problem VII-C. Language. Language is measured by means of a multiple choice type test of punctuation, capitalization, and correct language usage. In the Language test the Experimental population achieved a higher mean score than the Control population which approaches but does not reach statistical significance at the .05 level.

Problem VII-D. Science and Social Studies Concepts. Science and Social Studies Concepts is measured by means of a multiple choice type test. Results indicate that the Experimental population achieved a significantly higher mean score than the Control population.

Problem VII-E. Arithmetic. Arithmetic is measured by a test of Arithmetic Computation and a test of Arithmetic Concepts. In the Arithmetic Computation test the Control population achieved a significantly higher score than the Experimental population. There was no significant difference between the Experimental and Control populations in the test of Arithmetic Concepts.

Problem VIII Will There Be A Significant Difference Between The Performance Of The Boys And The Girls Of The Two Treatment Groups As Measured By The Stanford Achievement Test, Primary II?

Problem VIII-A. Reading Abilities. The results indicate that there was no significant difference between the boys or girls of the two treatment groups on the tests of Word Meaning and Paragraph Meaning.

Problem VIII-B. Science and Social Studies Concepts. The results indicate that there was no significant difference between the boys of the two treatment groups. The Experimental girls achieved a significantly higher score than the Control girls.

Problem VIII-C. Spelling. The results indicate that there was no significant difference between the boys of the two treatment groups. The Experimental girls achieved a significantly higher Spelling score than the Control girls.

Problem VIII-D. Word Study Skills. The results indicate that there was no significant difference between the boys or girls of the two treatment groups on the test of Word Study Skills.

Problem VIII-E. Language. The results indicate that there was no significant difference between the boys or girls of the two treatment groups on the test of Language.

Problem VIII-F. Arithmetic. On the test of Arithmetic Computation the Control boys achieved a significantly higher score than the Experimental boys. There was no significant difference between the girls of the two treatment groups.

On the test of Arithmetic Concepts there was no significant difference between either the boys or the girls of the two treatment groups.

Problem IX Will There Be A Significant Difference In Eagerness To Read And Maturity Of Reading Choices Between The Two Treatment Groups As Measured By An Eagerness To Read Scale And A Maturity Of Choice Scale?

Table 13

Means and Test of Significance of Reading Interest Scale for Boys, Girls, and Total Population of the Experimental and Control Groups.

	EXPERIMENTAL		CONTROL					
	N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
				Eagerness To Read				
Boys	85	3.48	79	2.51	.97	2.19	163	.05
Girls	92	3.91	71	3.47	.34	1.68	161	n.s.
Total	177	3.70	150	3.00	.70	1.95	325	.05
				Maturity Of Choice				
Boys	85	3.56	79	3.19	.37	2.04	163	.05
Girls	92	3.44	71	3.26	.18	1.74	161	n.s.
Total	177	3.49	150	3.22	.27	1.95	325	.05

Problem IX-A. Eagerness to Read. Results indicate that the total Experimental group attained a significantly higher score on the Eagerness to Read Scale than the Control group. The boys of the Experimental population attained a significantly higher score than the boys of the Control population. There was no significant difference between the scores of the girls of the two treatment groups.

Problem IX-B. Maturity of Choices. Results indicate that the total Experimental population achieved a significantly higher score than the

total Control population. The Experimental boys achieved a significantly higher score than the Control boys. There was no significant difference between the scores of the girls of the two treatment groups.

Problem X Will There Be A Significant Difference Between The Oral Reading Performance Of A Random Sample Population From The Two Treatment Groups For May Of The Experimental Year?

Table 14

Means and Test of Significance of Oral Reading Performance as Measured by the Gilmore Oral Reading Test.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
				Accuracy (Grade Equivalent)			
30	6.25	30	4.09	2.16	5.40	58	.01
				Rate (WPM)			
30	90.5	30	74.4	16.1	5.05	58	.01

On an individually administered test of oral reading accuracy and oral reading rate the Experimental sample achieved significantly better than the Control sample.

Problem XI Will There Be A Significant Difference Between The Word Recognition Ability Of A Random Sample Population From The Two Treatment Groups In May Of The Experimental Year?

Table 15

Means and Test of Significance of Word Recognition Ability as Measured by Gates Word Pronunciation Test.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	31.9	30	25.9	6.0	4.03	58	.01

On the individually administered Gates Word Pronunciation Test the Experimental sample achieved significantly better than the Control sample.

Table 16

Means and Test of Significance of Word Recognition Ability as Measured by the Fry Phonetically Regular Words Oral Reading Test.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	35.9	30	28.7	7.2	2.76	58	.05

On the individually administered Fry Phonetically Regular Words Oral Reading Test the Experimental sample achieved significantly higher mean scores than the Control sample.

Problem XII Will There Be A Significant Difference In Writing Mechanics, Spelling, Number Of Running Words, Number Of Different Words, And Number Of Polysyllabic Words Used Between A Random Sample Population Of The Two Treatment Groups On A Measure Of Written Language In May Of The Experimental Year?

Table 17

Means and Test of Significance of Writing Mechanics as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	81.2	30	75.7	5.5	2.01	58	.05

Results indicate that the Experimental group achieved a significant higher score in Writing Mechanics than the Control group.

Table 18

Means and Test of Significance of Number of Running Words as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	118.8	30	104.8	14.0	2.01	58	.05

Results indicate that the random sample Experimental group wrote significantly longer stories than the random sample Control group.

Table 19

Means and Test of Significance of Number of Different Words as Measured by the Grade Three Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	70.4	30	59.6	10.8	3.89	58	.01

The total number of different words scores were recorded in per cent. The results indicate that the random sample Experimental group achieved a significantly higher score than did the random sample Control group.

Table 20

Means and Test of Significance of Number of Words Spelled Correctly as Measured by the Grade Three Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	112.4	30	99.1	13.3	3.09	58	.01

Results indicate that the random Experimental group spelled significantly more words correctly than the random sample Control group.

Table 21

Means and Test of Significance of Number of Polysyllabic Words in the Written Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
30	12.2	30	7.9	4.3	2.54	58	.05

Results indicate that the random sample of the Experimental population utilized a significantly higher number of polysyllabic words on the Written Language Measure than the random sample group of the Control population.

Problem XIII Will There Be A Significant Difference In The Originality, Interest, And Story Consistency In The Creative Writing Sample Between A Random Sample Population Of The Two Treatment Groups In May Of The Experimental Year?

Table 22

Means and Test of Significance on Originality, Interest, and Story Consistency on the Grade Three Language Measure on a Random Sample Population.

EXPERIMENTAL		CONTROL					
N	Mean	N	Mean	Mean Diff.	t Value of Diff.	d.f.	Level of Sig.
				Originality			
30	2.2	30	1.8	.4	1.54	58	n.s.
				Interest			
30	3.5	30	3.0	.5	1.41	58	n.s.
				Consistency			
30	3.6	30	3.3	.3	.94	58	n.s.

Results indicate that there was no statistically significant difference between the random sample Experimental group and the random sample Control group on measures of Originality, Interest, and Story Consistency.

Problem XIV Will There Be A Significant Difference In Reading Achievement Between The Two Treatment Groups In May Of The Experimental Year When The Gates Advanced Primary Reading Tests Administered In September Of The Experimental Year Are Held Constant?

The co-variate in this hypothesis was achievement as measured by the Gates Advanced Primary Reading Test. The composite score of the Gates Word Recognition Test and the Gates Paragraph Meaning was held constant.

The interactions may be summarized as follows:

There was no significant difference in May of the experimental year between the two treatment groups when September pretests were held constant.

Problem XV Will There Be A Significant Difference In Reading Achievement Between The Two Treatment Groups In May Of The Experimental Year When The Stanford Achievement Tests Administered The Previous May In Second Grade Are Held Constant?

The co-variate in this hypothesis was achievement as measured by the Stanford Achievement Test, Primary II, were held constant.

There is no significant difference in Word Meaning in May of the experimental year when the Word Meaning test administered the previous May is held constant.

There is no significant difference in the Paragraph Meaning subtest between the two treatment groups when the Paragraph Meaning subtest administered in May of the previous year is held constant.

The Spelling subtest administered in May of the experimental year is significant in favor of the Experimental population when the Spelling subtest administered in May of the second grade year is held constant.

The Word Study Skills subtest is not significant in May of the experimental year when the Word Study Skills administered the previous May is held constant.

The Language subtest is not significant in May of the experimental year when the Language subtest administered in May of the previous year is held constant.

CHAPTER VI

CONCLUSIONS AND IMPLICATIONS

Fifteen hypotheses were declared for this study, and in light of the findings reported in the last chapter the following conclusions may be declared.

Will There Be A Significant Difference In Intelligence As Measured By The Kuhlmann-Anderson Intelligence Test In September Of The Experimental Year?

* * *

The higher measured intelligence of the Experimental girls and the total Experimental population is in agreement with the higher measured intelligence of the Experimental population. The findings of measured intelligence at the beginning of second and third grade is in contrast to the findings of intelligence on the same population in first grade. It seems unlikely that this difference can be attributed to pupil attrition due to retentions, movements from district and sickness because there was no significant difference in the rate of attrition between the two treatment groups.

It is suggested that the better performance in Reading of the Language-Experience Approach population in first and second grade may have raised the IQ significantly above that of the Control population. This could be true in each instance except the third grade boy population.

Will There Be A Significant Difference Between The Performance Of The Two Treatment Groups As Measured By The Gates Advanced Primary Reading Tests In September Of The Experimental Year?

There was no significant difference in performance between the total populations on the Word Recognition or the Paragraph Reading subtests.

Will There Be A Significant Difference Between The Performance Of The Boys And The Girls Of The Two Treatment Groups As Well As Within The Treatment Groups As Measured By The Gates Primary Reading Tests?

There was no significant difference between the boys of the two treatment groups on the Gates tests of Word Recognition or Paragraph Reading. There was no significant difference in performance between the girls of the two treatment groups on the Word Recognition test. However, the Experimental girls achieved significantly better on the Gates test of Paragraph Reading than the Control girls.

* * *

An initial examination of the statistical findings of the Gates Advanced Primary Tests show unexpected findings. It would appear that the trend of superiority in Reading clearly established by the Language-Experience Approach population in first and second grades is not evidenced by the Gates Test at the beginning of third grade. Of the six statistical tests of significance made, only one was statistically significant in favor of the Experimental population. Two others however showed a trend in favor of the Experimental population. The results then continue to suggest a superiority in Reading performance by the Experimental population but this trend is not as clearly established as it was at the beginning of second grade.

The results of the test administered in September of the third grade year indicate that the Experimental population entered third grade at a higher level of reading achievement than the Control population.

Will There Be A Significant Difference In Writing Mechanics, Spelling, Number Of Running Words, Number Of Different Words, And Number Of Polysyllabic Words Between A Random Sample Of The Two Treatment Groups On A Measure Of Written Language In September Of The Third Grade Year?

Results show that the random sample drawn from the Experimental population achieved significantly better than the Control population sample on writing mechanics, number of words spelled correctly, total number of running words, total number of different words, and total number of polysyllabic words used.

* * *

The emphasis placed upon written communication in the Language Arts Approach produced significantly better writers than those children who did not write extensively. The children in the Experimental group were encouraged to write as "best they could." This "best you can" philosophy was true for spelling as well as writing mechanics such as periods, capitals, paragraphing, etc. The children were encouraged to write anything they could express orally. Consequently, this results in longer stories with greater vocabulary variety. Of particular interest is the fact that the children in the Language Arts Approach wrote extensively and spelled "as best they could" were better spellers than those children who were not given as much freedom in their writing. The

implication is clear that by allowing children to write and attempt spellings of words they couldn't ordinarily be attempting in the more traditional classroom, spelling proficiency is enhanced.

Will There Be A Significant Difference In The Originality, Interest, And Story Consistency In The Creative Writing Sample Between A Random Sample Population Of The Two Treatment Groups In September Of The Experimental Year?

Results indicate that the random sample group drawn from the Experimental population achieved significantly better than the random Control group on the three tests of Originality, Interest, and Story Consistency.

* * *

The implications are clear. Those children who write more often and who do so without the restrictions of certain spelling and grammatical constraints focus on the content of what they are writing. Consequently, the writing performances tend to be more original and the plot development tends to be more consistent. An approach such as the Language Arts Approach which encourages writing results in a more interesting, original, and organized product.

Will There Be A Significant Difference In Attitude Toward Reading As Measured By A Reading Attitude Inventory In May Of The Experimental Year?

There was no significant difference in attitude toward reading as measured by the San Diego Attitude Inventory between the Experimental and Control populations either on a Total population basis or on a Boy or Girl basis.

* * *

This is a curious finding even though the results on this measure of attitude toward reading has been consistent in each of the first three years for the population of this study.

Examination of the reading achievement data for each of the first three grades of school suggest superior reading performance by the Experimental population. It would seem likely that children who read better would have a more positive attitude toward reading. In addition a teacher questionnaire indicated that the total Experimental population showed greater Eagerness To Read than the total Control population. It should also be mentioned that because of the close research controls employed in this study and the accompanying classroom observations by principals, supervisors, classroom visitors, parents, and the project director and assistant reported almost without exception a very positive attitude toward reading in the Experimental classrooms that was not as evident in the Control classrooms. However, the attitude inventory employed in this study is not consistent with other evidence regarding the attitude of the children toward reading.

Will There Be A Significant Difference Between The Performance Of The Two Treatment Groups As Measured By The Stanford Achievement Test, Primary II, In May Of The Experimental Year?

The total Experimental population achieved significantly higher scores than did the Control population on the subtests of Science and Social Studies Concepts, and Spelling. There was no significant difference in performance between the two groups on subtests of Word Meaning,

Paragraph Meaning, Word Study Skills, Language, and Arithmetic Concepts. The Control population achieved significantly better than the Experimental population on Arithmetic Computation.

Will There Be A Significant Difference Between The Performance Of The Boys And The Girls Of The Two Treatment Groups As Measured By The Stanford Achievement Test, Primary II?

Results indicate that the girls of the Experimental population achieved significantly better than the Control girls on the subtests of Science and Social Studies Concepts, and Spelling. There was no significant difference on the other subtests.

The boys of the Control population achieved significantly better than the Experimental boys on the Arithmetic Computation subtest. There was no significant difference on the other subtests.

* * *

Only three of the subtest findings on the Stanford Achievement Test were found to be statistically significantly different between the two treatment groups. The Experimental girls and the total Experimental population achieved significantly higher scores on the subtest of Science and Social Studies Concepts than did the Control girls or the total Control population. It is likely that the superior performance of the Experimental group might be due to the Language Arts Approach. In the Language Arts Approach children identified interest areas during the individualized reading months. They would read extensively in their areas of interest and then during the last few days of the month the children shared what they had learned with their classmates and the

children in other classrooms. Many of the children selected areas of interest that were oriented toward the physical and social sciences. The implication here is clear. The opportunity for self-discovery through the reading of all types of materials and reading sources increases the child's awareness and knowledge of his world and the fasciantions within it.

The Spelling subtest showed the Experimental population to be clearly superior. This has been a consistent finding in both the second and third grade report. This finding is most interesting because it should allay the fears of some that giving children in the primary grades to spell as "best they can" would produce poor spellers. Quite the contrary is true. The evidence is clear that those children who have a chance to write and spell as "best they can" become better spellers than children who are relegated to copying the news of the day off the board as their exercise in writing. In addition the clear superiority in spelling performance by the Experimental group may also be attributed to the formal spelling program of the Experimental population as discussed in Chapter IV of Instructional Procedures. Each child in the Experimental population was in a test-retest, self-correction Spelling program geared to the instructional level of each individual child. When children are given spelling words at their instructional level retention of the words is facilitated.

The results of the Arithmetic Computation subtest showed a significantly better performance by the Control boys and the total Control population. This was a consistent finding in both first and second grade.

It seems likely that the Control schools used a more effective Arithmetic program in their elementary school curriculum than did the Experimental schools. The first and second grade Experimental treatment group employed an approach to Arithmetic which made extensive use of an abacus for computation. During the testing situation the pupils did not have access to the abacus. During the third grade year the children in the Experimental population were exposed to an Arithmetic program new to the school in the district. It seems likely that the above factors contributed to the significantly poorer performance by the Experimental population on the test of Arithmetic Computation.

Will There Be A Significant Difference In Eagerness To Read And Maturity Of Reading Choices Between The Two Treatment Groups As Measured By An Eagerness To Read Scale And A Maturity Of Choice Scale?

Results indicate that the total Experimental population and the Experimental boys attained a significantly higher score on both the Eagerness To Read Scale and the Maturity of Choice Scale than did the total Control population and the Control boys respectively. There was no significant difference between the girls of the two treatment groups.

* * *

This was a non-standardized measure of a child's interest in reading and the maturity of his reading selections. It is evident that the boys of the Experimental population and the total Experimental population were more eager to read than the Control population and when they read they exhibited more maturity in the selections of reading material.

The Experimental population spent significantly more instructional time on individualized reading than did the Control population. The selecting and the reading of materials by the students on an individual basis may account for the differences between the two treatment groups.

An Individualized Reading program gives the child an opportunity to read more materials geared to his own individual reading tastes. In addition any effective individualized reading program provides the child with many opportunities to make his own selections of reading materials.

Will There Be A Significant Difference Between The Oral Reading Performance Of A Random Sample Population From The Two Treatment Groups In May Of The Experimental Year?

On an individually administered test of oral reading the Experimental group achieved significantly better than the Control group on both Accuracy and Rate of Oral Reading.

* * *

The superior oral reading performance of the Language Arts treatment group may be explained by two factors. First, the Experimental treatment group tended to perform better on the individually administered test of word recognition. Consequently, they were more able to read smoothly at a higher level. Secondly, the Language Arts children had more chance to practice meaningful oral reading. In first grade they heard the teacher read back their own individually dictated stories. The students read their own dictated story. In first, second, and third grade the students read their creative writing orally and they read orally to prove points in a D.R.T.A. The oral reading in the Language Arts

Approach was always meaningful. Consequently, the students developed a better facility for oral reading.

Will There Be A Significant Difference Between The Word Recognition Ability Of A Random Sample Population From The Two Treatment Groups In May Of The Experimental Year?

Results indicate that the Experimental population achieved significantly better than the Control population on both individually administered tests of word recognition.

* * *

The measures used to determine the pupils ability to recognize words were not standardized tests. The tests do, however, provide some measure of a pupil's word recognition ability.

No attempt was made to record a pupil's way of attacking a word. Because each list presented only words in isolation the pupils were denied the use of context clues to meaning.

The superior performance by the Experimental group may be attributed to the following factors. First, the Language Arts pupils had received a minimum of twenty minutes per day in first, second, and third grade in word recognition training. Secondly, the Language Arts children had done more reading. Consequently, their reading vocabulary tended to be larger. And thirdly, the extensive creative writing by the Language Arts children had permitted them to apply their word recognition training in the functional situation of writing. All of these factors appear to have contributed to the significantly larger reading vocabulary of the Language Arts pupils.

Will There Be A Significant Difference In Writing Mechanics, Spelling, Number Of Running Words, Number Of Different Words, And Number Of Polysyllabic Words Used Between A Random Sample Population Of The Two Treatment Groups On A Measure Of Written Language In May Of The Experimental Year?

Results indicate that the Language Experience group exhibited a significantly superior performance on each measure; writing mechanics, number of running words, number of different words, number of words spelled correctly and the number of polysyllabic words used.

* * *

These are significant findings. It suggests that Language Arts pupils write longer stories, use a greater number of different words and polysyllabic words and spell more words correctly. The Language Arts Approach as employed in this study encouraged creative writing as soon as the child in first grade had a few basic sight vocabulary words and was able to do some auditory-visual discrimination activities. Throughout the primary grades the children in the Language Arts Approach had an opportunity to write extensively. They enjoyed this creative activity. The children were not unduly restricted by spelling and grammatical constraints. This type of program obviously produces a more expressive and articulate writer as evidenced by the analysis of the data of the language samples.

Will There Be A Significant Difference In The Originality, Interest, And Story Consistency In The Creative Writing Sample Between A Random Sample Population Of The Two Treatment Groups In May Of The Experimental Year?

Results indicate that there was no significant difference between the two treatment groups on measures of Story Interest, Originality, or Consistency.

* * *

This was a most curious finding. It is in direct contrast to the results on these same measures at the end of second grade and in September of the third grade year. No plausible explanation can be found. One can only speculate.

It should be noted that on all three measures the Experimental group attained higher scores. In two cases the difference between the two treatment groups obviously is approaching statistical significance. A comparison of the scores between September and May of third grade indicate that the Control group showed greater growth during the third grade year on the measures of Interest, Originality, and Story Consistency than did the Experimental group. It is possible that the Experimental group had reached a plateau by the beginning of third grade and the Control group is just beginning to catch up.

An additional possibility should be mentioned that may be relevant to these findings. A reading of the Research Control for each of the three years suggests a very careful attempt to control the instructional procedures of the two respective treatment groups. However, in instances some contamination could have taken place. The third grade teachers of the Georgetown school participated in a summer school program which emphasized creative writing as an important aspect of an effective Language Arts curriculum. The Georgetown teachers were intrigued by the

educational returns that could be gotten from encouraging children to write creatively. These teachers found it difficult not to overstep the boundaries of suggestions in the basal reader manuals. They did in fact follow the basal reader manuals as they were requested to do. However, it is likely that they permitted children to write creatively more than they had in previous years. It is conceivable that some contamination did take place which resulted in the findings reported. This being the case the results produce more strong evidence of the important role that creative writing can play at the elementary school level.

Will There Be A Significant Difference In Reading Achievement Between The Two Treatment Groups In May Of The Experimental Year When The Gates Advanced Primary Reading Tests Administered In September Of The Experimental Year Are Held Constant?

There was no significant difference in May of the experimental year between the two treatment groups when September pretests were held constant.

* * *

On the group administered test of reading achievement no significant differences were found. Only the two subtests of Word Meaning and Paragraph Meaning were compared in this hypothesis. Though both subtests showed superiority by the Experimental population the difference was not large enough to reach statistical significance. It should be noted that both of these subtests of the Stanford Achievement Battery require only limited facility in reading proficiency. The questions are usually literal rather than inferential in nature and in addition only a short amount of content is read before the pupil is asked to respond to the questions.

Will There Be A Significant Difference In Reading Achievement Between The Two Treatment Groups In May Of The Experimental Year When The Stanford Achievement Tests Administered The Previous May In Second Grade Are Held Constant?

Results indicate that there is no significant difference in Word Meaning, Paragraph Meaning, Language, or Word Study Skills between the two treatment groups when corresponding subtests of the previous year are held constant. The Spelling subtest administered in May of the experimental year is significant in favor of the Experimental population when the Spelling subtest administered in May of the second grade year is held constant.

* * *

It appears that based on standardized test results the Control population has closed some of the gap between the two treatment groups which the Experimental population had clearly established in first and second grade. Some of the differences between the two treatment groups are not great enough to reach statistical significance. It is important to note however that on the Spelling subtest the superior performance established by the children of the Language Arts Approach continues. The Experimental population began the year with a significantly better Spelling performance and they increased their advantage during the third grade year.

* * *

In discussing the conclusions of this study of the Effectiveness of a Language Arts Approach and the Basal Reader Approach to Reading

Instruction a clear pattern emerges. A number of the standardized group administered tests do not discriminate between the two treatment groups. This was true of the Gates Advanced Primary Tests and some of the subtests of the Stanford Achievement Tests. It was also true of the San Diego Reading Attitude Inventory. However, almost without exception the individually administered tests show a clearly superior performance by the Experimental treatment group. On both individually administered word recognition tests the Language Arts Approach resulted in a significantly superior performance. This was also true on both tests of oral reading proficiency. An analysis of the written language in both September and May of the third grade year showed the pupils in the Language Arts Approach writing significantly more words correctly. Results also suggest strongly that children in a Language Arts Approach are more eager to read and they make more mature reading choices. Of all the tests of significance between the two treatment groups the Basal Reader Approach showed a significantly better performance on only one measure; that was on the Arithmetic Computation subtest.

The evidence is clear. An elementary curriculum which utilizes a Language-Experience or Language Arts Approach to beginning reading instruction extended through the primary grades will reap significant reading proficiency benefits not found with a Basal Reader Approach. The superior performance in reading by the Language Arts Approach can most likely be traced to the focus on all the communication skills: listening, speaking, reading, and writing.

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APPENDIX A

List of Tests Used in Study and Copies of Individually Administered Word Recognition Tests

PRETESTS

Kuhlmann-Anderson Test, Seventh Edition, Booklet CD, 1964 Revised. Personnel Press, Inc., Princeton, New Jersey.

Gates Advanced Primary Reading Tests, 1958 by Arthur I. Gates, Bureau of Publications, Teachers College, Columbia University.

POSTTESTS

Stanford Achievement Test, Primary II, Form W, 1964, by Kelley, Madden, Gardner, and Rudman. Harcourt, Brace and World, Inc., New York.

Gilmore Oral Reading Test, Form B, 1951, by John V. Gilmore. Harcourt, Brace and World, Inc., New York.

Phonetically Regular Words Oral Reading Test, by Edward Fry, Rutgers University.

Gates Word Pronunciation Test, by Arthur I. Gates.

An Inventory of Reading Attitude, Superintendent of Schools, Department of Education, San Diego County.

Phonetically Regular Words Oral Reading Test
1966 Version

Edward Fry, Rutgers University
New Brunswick, N. J.

Name_____Date_____

School_____Room____Code Number_____

Examiner_____No. of words read correctly_____

1. nap	16. stalk	31. yoke
2. pen	17. haul	32. glory
3. hid	18. jaw	33. shy
4. job	19. soil	34. quaff
5. rug	20. joy	35. taught
6. shade	21. frown	36. bundle
7. drive	22. trout	37. nix
8. joke	23. term	38. civic
9. mule	24. curl	39. Philip
10. plain	25. birch	40. preach
11. hay	26. rare	41. cracked
12. keen	27. star	42. swish
13. least	28. porch	43. frankfurter
14. loan	29. smooth	44. twelfth
15. slow	30. shook	45. drowse

DIRECTIONS TO EXAMINER: Have pupil read words from one copy while you mark another copy. Do not give pupil a second chance, but accept immediate self-correction. Let every pupil try the whole first column. If he gets two words correct from word number six on, let him try the whole second column. If he gets three words correct, let him try the whole third column. Mark correct words C and incorrect words X.

GATES WORD PRONUNCIATION TEST

EXAMINER'S COPY

DIRECTIONS: Have the child read the words out loud. Tell him you would like him to read some words for you. If he fails the first time, ask him to try the word again. Continue until ten consecutive words have been missed. As the words become difficult, special care should be taken to encourage the child. The score is one point for each word correctly pronounced on the first trial, one-half point for each word correctly pronounced on the second trail. (Note: 9½ correct would be scored as 10.)

---

1. so	14. about	27. conductor
2. we	15. paper	28. brightness
3. as	16. blind	29. intelligent
4. go	17. window	30. construct
5. the	18. family	31. position
6. not	19. perhaps	32. profitable
7. how	20. plaster	33. irregular
8. may	21. passenger	34. schoolmaster
9. king	22. wander	35. lamentation
10. here	23. interest	36. community
11. grow	24. chocolate	37. satisfactory
12. late	25. dispute	38. illustrious
13. every	26. portion	39. superstition
		40. affectionate

Child's Name: _____ Test date _____

Examiner: _____ Birth date _____

Age: _____

AN INVENTORY OF READING ATTITUDE

Yes No 1. Do you like to read before you go to bed?

Yes No 2. Do you think that you are a poor reader?

Yes No 3. Are you interested in what other people read?

Yes No 4. Do you like to read when your mother and dad are reading?

Yes No 5. Is reading your favorite subject at school?

Yes No 6. If you could do anything you wanted to do, would reading be one of the things you would choose to do?

Yes No 7. Do you think that you are a good reader for your age?

Yes No 8. Do you like to read catalogues?

Yes No 9. Do you think that most things are more fun than reading?

Yes No 10. Do you like to read aloud for other children at school?

Yes No 11. Do you think reading recipes is fun?

Yes No 12. Do you like to tell stories?

Yes No 13. Do you like to read the newspaper?

Yes No 14. Do you like to read all kinds of books at school?

Yes No 15. Do you like to answer questions about things you have read?

Yes No 16. Do you think it is a waste of time to make rhymes with words?

Yes No 17. Do you like to talk about books you have read?

Yes No 18. Does reading make you feel good?

Yes No 19. Do you feel that reading time is the best part of the school day?

Yes No 20. Do you find it hard to write about what you have read?

Yes No 21. Would you like to have more books to read?

Yes No 22. Do you like to read hard books?

Yes No 23. Do you think that there are many beautiful words in poems?

Yes No 24. Do you like to act out stories you have read in books?

Yes No 25. Do you like to take reading tests?

APPENDIX B

Analysis of Covariance

Covariate - Gates Advanced Primary Reading Test

Dependent Variable	Source of Variation	Adjusted Sum of Squares	Degrees of Freedom	Mean Square	F
	Total	9606	227		
Word Meaning	Error	9491	226	42	2.74
	Treatment	115	1	115	
	Total	32197	227		
Paragraph	Error	31886	226	141.9	2.19
Meaning	Treatment	311	1	311	

Covariate - Stanford Achievement Primary II Word Meaning Subtest

	Total	11104	227		
Word Meaning	Error	10992	226	48.6	2.27
	Treatment	112	1	261	

Covariate - Stanford Achievement Primary II Paragraph Meaning Subtest

	Total	36542	227		
Paragraph	Error	36351	226	160.8	1.18
Meaning	Treatment	191	1	191	

Covariate - Stanford Achievement Primary II Spelling Subtest

	Total	44181	227		
Spelling	Error	19662	226	87	5.18
	Treatment	4519	1	451	

Covariate - Stanford Achievement Primary II Word Study Skills Subtest

	Total	38907	227		
Word Study	Error	38448	226	170.1	2.70
Skills	Treatment	459	1	459	

Covariate - Stanford Achievement Primary II Language Subtest

	Total	24242	227		
Language	Error	23897	226	105.77	3.17
	Treatment	335	1	335	

APPENDIX C

Schools and School Personnel Cooperating in the Investigation

and University of Delaware Graduate Students

Majoring in Reading

The following schools and school personnel participated in one or more phases of the investigation.

Special words of gratitude are needed to express appreciation for their cooperation. Each rendered a tremendous service to us and even greater service to the children who have been helped and who may be helped in the future.

SEAFORD SPECIAL SCHOOL DISTRICT

Kenneth C. Madden - Superintendent
John W. Royal - Administrative Assistant
Mary Phillips - District Reading Consultant

Central Elementary School
Robert W. Thomas, Sr. - Principal
Shirley S. Garland - Secretary
Eileen Craft - Librarian
Lynn M. Colburn
Carolyn Griffith
Norma L. Keiser
Majorie Marshall
Margaret R. Russell

West Seaford Elementary School
Mary S. Wiley - Principal
Doris H. Mullin - Secretary
Marian Henderson - Librarian
Leona M. Brecht
Evelyn P. Buckworth
Shirley Butler
Jamesie D. Evans
Mary W. Handy
Jean T. Ricks
Betty J. Tull
Sharon W. Whaley

GEORGETOWN SPECIAL SCHOOL DISTRICT

William P. Bant - Superintendent

Georgetown Elementary School
Byron M. Phillips - Principal
Virginia Pepper - Secretary
Mary Byrne - Librarian
Rebecca Dodd
Dorothy Elliott
Marjorie Hartranft
Madelyn Murray
Madelyn Trammell

HARRINGTON SPECIAL SCHOOL DISTRICT

Albert W. Adams - Superintendent

Harrington Elementary School
Solomon Markowitz - Principal
Margaret Homewood - Secretary
Sandra Phillips - Librarian
Esther Bader
Oda Baker
Lula Macklin
Doris Mills
Pearl Cain

The following graduate students at the University of Delaware majoring in reading participated in certain phases of this investigation.

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Ronald L. Cramer
Carol Dixon
Sunday Haffen
Ann L. Houseman
Thomas Lackman
Naomi L. Moore
Ann M. Noakes
Mary Ann Rozsas
Marian Sawin
Marian Stevenson
Roberta Trainor
William Valmont

APPENDIX D

Directed Reading-Thinking Activity - Group Type

College of Education
University of Delaware

THE READING-STUDY CENTER
Russell G. Stauffer, Dir.

Newark
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DIRECTED READING-THINKING ACTIVITY - GROUP TYPE

A group type directed reading-thinking activity has two distinguishing features. All members of a group read at about the same level of competency and all read the same material at the same time. Pupil achievement level or instructional level is best determined by means of an informal reading inventory including word attack skills, a general language inventory including spelling, daily observations of reading performance and a wise use of standardized test results. For the development of foundation skills of reading, basic readers are most useful. Other materials may be used, however. In other words, a D-R-T-A can be effective using science or social science materials and so on, or using periodicals, newspapers, or books, and so on.

The primary objective of group-type D-R-T-A training is to develop skill in reading critically. A critical reading performance requires each reader to become skilled at determining purposes for reading. Either the reader declares his own purposes or if he adopts the purposes of others, he makes certain he knows how and why he is doing so. He also speculates about the nature and complexity of the answers he is seeking by using to the fullest his experience and knowledge relevant to the circumstances. Then he reads to test his purposes and his assumptions. As a result, he may: one, find the answer(s) he is seeking literally and completely stated; two, find only partial answers or implied answers and face the need to either restate his purposes in light of the new information gained or to suspend judgment until more reading has been done; three, need to declare completely new purposes.

This problem solving approach to reading may be used with fiction and non-fiction. The purposes in either circumstance will vary according to the reader's ability to perform critically and creatively and to his level of maturity. His reading rate will vary according to the purposes declared and the nature and difficulty of the material.

Proof that answers have been found either in part or completely may be provided to the group by means of oral rereading or by oral or written reporting. Each means of providing proof should be used. At the primary level more frequent use may be made of oral means of providing proof than at the intermediate level and beyond.

Each pupil uses the word attack skills he has learned as he sees a need to do so. So-called "new words" as listed in vocabulary lists of basic readers are not "taught" in advance of the reading of a story or selection. The controlled vocabulary context of a

basic reader is especially designed to give the reader an opportunity to use his word attack skills in a context that will not frustrate him by making excessive demands. Furthermore he uses his skills under the immediate supervision of a teacher. As soon as a glossary is provided the pupil is trained to turn there for help in pronunciation and meaning before turning to the teacher.

The teacher sets the climate for a D-R-T-A and directs the process. This she does by the frequent use of three questions: "What do you think?" "Why do you think so?" and "Can you prove it?" While the children are reading she remains available constantly to provide help as needed in word recognition, or in comprehension. Follow-up training on skill needs are best determined by this means.

Group sizes considered most acceptable for good teaching range from eight to twelve members. Groups of this size permit pupils to compare and contrast their thinking with that of others in the dynamics of interacting minds. Each can observe how others use evidence, make assumptions or educated guesses, adapt rate, provide proof, and perform creatively.

Certain basic principles and assumptions underlie the effective development of a group directed reading-thinking activity. They may be listed as follows:

I. Identifying Purposes for Reading

A. Individual pupil purposes delimited by

1. Pupil experience, intelligence, and language facility
2. Pupil interests, needs, and goals
3. Group interests, needs, and goals
4. Influence of the teacher
5. Influence of the content

a. nature and difficulty of the material
b. title and subtitles and the like
c. pictures, maps, graphs, charts
d. linguistics clues

B. Group purposes determined by the

1. Experiences, language facility, and intelligence of each member of group
2. Interests, needs, and goals of each member of the group
3. Concensus of the group and/or of sub-groups
4. Influence of the teacher
5. Influence of the content

II. Adjusting rate of reading to the purposes declared and to the nature and difficulty of the material. This adjustment is made to:

A. Survey: to overview a selection or text
B. Skim: to read swiftly and lightly for single points
C. Scan: to read carefully from point to point
D. Read critically: to read, to reread, and to reflect so as to pass judgment

III. Observing the Reading

A. Noting abilities to adjust rate to purpose and material

B. Recognizing comprehension needs and providing help by clarifying

1. Purposes
2. Concepts
3. Need for rereading

C. Acknowledging requests for help with word recognition needs by providing immediate help in the use of

1. Context clues: meaning clues
2. Phonetic clues: sound clues
3. Structural clues: sight clues
4. Glossary clues: meaning, sound, and sight clues

IV. Developing Comprehension

A. Checking on individual and group purposes

B. Staying with or redefining purposes

C. Recognizing the need for other source material

D. Developing concepts

V. Fundamental Skill Training Activities: discussion, further reading, additional study, writing

A. Increasing powers of observation (directed attention)

B. Increasing powers of reflection by

1. Abstracting: reorganizing old ideas, conceiving new ideas, distinguishing between ideas, generalizing about ideas, and making inductions and analyses

2. Judgment: formulating propositions and asserting them
3. Reasoning: inferring and demonstrating, and systematizing knowledge deductively

C. Mastering the skills of word recognition: picture and language context analysis, phonetic and structural analysis, and dictionary usage

D. Developing vocabulary: pronunciations; word meanings; semantic dimensions; analogus words; contrasted words; word histories; new words

E. Developing adeptness in conceptualization and cognitive functioning: making and testing inferences; particulars, classes, and categories; reversibility, mobile equilibrium, and conservation

F. Mastering the skills of oral reading: voice, enunciation, and expression; reading to prove a point or to present information; reading to entertain (prose and poetry); choral reading.

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15. ABSTRACT *(250 words max.)*

The purpose of this study was to test the hypothesis that there was no significant difference between the effects of two methods of primary reading instruction when extended and applied at the third grade levels. The two methods compared were the Language Arts Approach and a Basic Reader Approach. The sample was comprised of 22 third grade classrooms in three towns in southern Delaware. Twelve classrooms used the Language Arts Approach and 10 classrooms used the Basic Reader Approach. In September of the experimental year each subject was administered the Kuhlman-Anderson Test and the Gates Advanced Primary Reading Tests of Word Recognition and Paragraph Reading. A creative writing sample was also obtained from each child. The following instruments to measure achievement were administered in May of the experimental year: San Diego Reading Attitude Inventory, Stanford Achievement Test Primary II, the Gilmore Oral Reading Test, Fry Test of Phonetically Regular Words Oral Reading Tests, and Gates Word Pronunciation Test. In addition a creative writing sample was obtained from each child.

Results indicate that the Language Arts population achieved significantly higher scores on the Stanford Achievement subtests of Science, Social Studies Concepts, and Spelling, as well as on Accuracy and Rate on the Gilmore Oral Reading Test. A Language Arts sample also achieved significantly better on the two individually administered tests of word recognition and also on the measures of creative writing such as Writing Mechanics, Spelling, Number of Running Words and Different Words, and Number of Polysyllabic Words.

16. RETRIEVAL TERMS *(Continue on reverse)*

Xprmt of Apprchs to Prmry Rdng Xtnded nd Appld to Thrd Grd. Cmprsn two Apprchs--Lnguage Arts nd Bsl Rdr. Reprts Poplatns, Instrtnl Prcedrs, Statstel Dta nd Cnclusns.

17. IDENTIFIERS

Figure 3 ERIC Document Resume