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ABSTRACT

This study was designed to investigate whether the comprehension skills of the better readers in second and third grade could be significantly increased through the use of a reading enrichment program as an adjunct to their classroom reading program. Subjects were 64 pupils in three second-grade and four third-grade classes in a middle-class suburban community. Subjects were randomly assigned to either a control or an experimental group. The experimental group subjects participated in the reading enrichment program conducted by the investigator twice each week over a 16-week period, each 45-minute session replacing the regularly scheduled classroom reading instruction. Subjects in the control group received only regular classroom reading instruction. Pre- and posttest measures were obtained through the use of the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary Two Battery, Form W. Analysis of the results indicated that the students in the reading enrichment program did not show significantly greater gains in Word Meaning scores, but did show significantly greater gains in Paragraph Meaning scores. (WR)

A READING ENRICHMENT PROGRAM TO INCREASE COMPREHENSION OF SECOND- AND THIRD-GRADE STUDENTS

A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

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THE STATE UNIVERSITY OF NEW JERSEY

BY

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CHAPTER I

INTRODUCTION

According to Stock (1955), better readers in second and third grade are often left to work independently; since their reading ability is generally above grade level, little is done to further increase their reading skills. It is not a cause of alarm, or even of concern, if they are not making optimal progress. To a large extent, they are a neglected group, their educational opportunities not being in proportion to their abilities or their potential.

A reading enrichment program, tailored to meet the instructional needs of these children, could extend their concepts and broaden their understanding. Enrichment has been described as another way of meeting individual needs and of selecting and organizing appropriate learning experiences (Gibbony, 1966).

What experiences in reading will contribute most to the development of these high achieving children? Woestehoff (1958) investigated some of the problems in teaching children who achieved above-grade level placement, finding little justification for assuming that a

given level of general reading ability will assure an equivalent level of competence in the more complex comprehension skills. Numerous writers and reading experts have presented analyses of the processes and skills thought to be involved in comprehension (Kerfoot, 1965). Since it is generally accepted that the primary criterion of reading is comprehension, it follows that a greater emphasis on the earlier development of various comprehension skills is imperative for all children, including those reading above grade level.

Statement of the Problem

Will the better readers in the second and third grade, given a reading enrichment program, be able to increase their reading comprehension more than second- and third-grade better readers given the same classroom reading program but not the enrichment program?

Hypotheses

In order to answer the question in this study, the following hypotheses were proposed:

1. There will be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, Form W, in Word Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading

program, as compared with the posttest scores on this same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program.

2. There will be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, in Paragraph Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading program, as compared with the posttest scores on this same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program.

Significance of the Study

Many educators are seeking new ways to provide for individual differences at the upper ability levels. School districts are beginning to come to the realization that talented pupils must be given the opportunity to develop their potential early in their school careers. Where this is not done, outstarding potential may yield only mediocre accomplishments.

If it can be demonstrated that a reading enrichment program with emphasis on comprehension skills can improve the comprehension ability of these pupils, such a program could be easily incorporated into the regular

curriculum with a minimum of difficulty, and without the necessity of undergoing any great expense.

Definition of Terms

Better readers. Each of the seven classrooms involved in this study were divided into three reading groups (upper, middle, lower) by the classroom teachers. The better readers were those pupils in the upper reading groups of each class.

Reading Enrichment Program. Use of Reading for Concepts (W. Liddle, ed. [New York: McGraw-Hill, 1970]). This is a set of practice readers developed to teach particular reading skills in a carefully organized sequence of comprehension skill development. The second-graders used Book A, and the third-graders used Book B. Additional work was provided in Thirty Lessons in Outlining (P. Furbush, E. Ross, & D. Durrell [Wellesley, Mass.: Curriculum Associates, 1971]), as well as the use of teacher-made word games, vocabulary exercises, and brain teasers.

Classroom Reading Program. The basal reading series used in the population school for grades 1, 2, and 3--Keys to Reading 1972 (T. L. Harris, M. Creekmore, M. Greenman, & H. Allen [Indianapolis, Ind.: The Economy Co., 1972]).

Comprehension. Scores on the Stanford Achievement Test, Primary II Battery, Form W, in Word Meaning and Paragraph Meaning.

Limitations of the Study

The community used in this study was an upper-middle-class, white, suburban community. Consequently, results of this study may not be generalizable to an urban school system.

Reading achievement was measured after only four months of enrichment. A longer period of enrichment might have constituted a more valid test of the enrichment program.

Children in the experimental group moved from their own classrooms to a different classroom and teacher for the enrichment program. In contrast, children in the control group remained in their own classroom with their own teacher. Thus, the movement and teacher variable may have resulted in an uncontrolled "Hawthorne effect." This possibility may have been reduced to some extent in that neither the children, the teachers, nor the parents of the children involved were aware that an experimental study was in progress (i.e., the reading enrichment program is an ongoing part of the reading program in the school involved in this study). Further, the reading enrichment teacher (i.e., this investigator) was a member of the

school staff, and therefore was familiar to the children in both the experimental and enrichment groups.

Overview of the Study

Chapter II includes a survey of the literature undertaken to determine: the characteristics of better readers; the educational potential of high reading achievers; the definition, philosophy, and objectives of reading enrichment; what authorities in the reading field mean by comprehension; and the various abilities that contribute to comprehension.

Chapter III explains how the population for this study was selected, how the reading enrichment program was designed, why the tests used in the study were chosen, how they were administered, the experimental design, and the way in which the collected data were statistically analyzed.

Chapter IV provides an analysis of the data as it applies to the review of the literature.

Chapter V is a summary of the study.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter considers commonly identified characteristics of high reading achievers in the primary grades, and their educational potential. A survey of the literature was undertaken to discover previous attempts to accelerate or enrich the reading achievement of these children. This survey indicated that the term "enrichment" embodies broad connotations that vary widely among various school systems, and that serves to identify only vaguely a broad type of curricular program directed toward the superior student. This review attempts to define enrichment precisely, and to elucidate its philosophy and objectives.

In addition to considering enrichment, this survey of the literature deals with what is meant in the reading field by the term comprehension, the processes and cognitive skills thought to be involved in comprehension, and the development of primary programs designed to increase comprehension.

Characteristics of Better Readers

The characteristics of the more capable readers in grade 3 were analyzed in a study by Kellenberger (1965). Results indicated superior ability in reasoning, generalizing, logical thinking, and comprehension. These students were able to perform highly difficult mental tasks and to learn more rapidly and more easily than most children. Other characteristics found for good readers in this study were a large vocabulary, a long concentration span, good retention for stimuli heard or read, aptness with words and numbers, and a wide range of interests. A study conducted by the Duarte Unified School District (1963) added a keen power of observation, a questioning attitude, and a dislike for drill and routine to the characteristics found by Kellenberger.

Educational Potential of High Reading Achievers

High reading achievers pose a challenge even to a discerning teacher, since there is a tendency on the part of the teacher to neglect the individual who can "make it on his own [Furr, 1970]." Since these children meet the required academic standards, teachers do not always make an effort to help them develop their reading potential. Often they are allowed to mark time or even lose ground with respect to efficient reading and study habits. It is

conceivable that a child who is reading above grade level may actually be reading below his potential, and therefore may benefit from an enrichment program.

Good readers, at the primary grades level, have special needs relative to the objectives of reading, and they need instruction of a different nature than less skillful readers. They require a flexible program, free from restrictive course outlines. This premise is borne out by a number of studies: Gates (1962) conducted a study of the word recognition ability and the reading vocabulary of second- and third-grade children. His results showed that nearly half (47%) of the children could recognize new words in the third- and fourth-grade readers. He concluded that these children had read widely enough and had developed sufficient word analysis skill to enable them to acquire a reading vocabulary far beyond the content of their basal readers. Johnson (1964) undertook a study of the reading achievement of children in four elementary schools, concluding that children in the second grade in each school read further beyond their expected reading levels than children in the fourth and sixth grades. Tatham (1969) found that children in grades 2 and 4 who are good readers use more complex language structure than average readers. It is not uncommon to find that brighter pupils gain skill over the summer vacation rather

than lose it (Stock, 1955). These students require a relatively short period of time to renew school habits, regain lost vocabulary, and acquire new interest and enthusiasm for school tasks. Challenging reading material needs to be made available quickly so that the increased maturation and interest are utilized.

Reading Enrichment

Definition of reading enrichment. According to Hill (1969), the term enrichment is often too loosely applied to a variety of programs within the curriculum directed toward the superior student. In her view, the objectives of an enrichment program should be to develop each pupil's individual potential to reason logically.

A number of definitions are more specific. Tannenbaum (1962) viewed enrichment as providing for individual differences at the upper ability levels. According to Brown (1956), enrichment consists of adding materials or experiences to the curriculum other than those offered to the average student. He discussed three types of enrichment: projects prepared along the lines of the pupil's special interest; study of the fine arts; and "busy work" or unnecessary drill; the last type generally meaning learning impoverishment for the student. Gallagher (1964) defined enrichment as any activity that develops the intellectual skills and talents of the child. He added

that unless those extra activities serve to advance those special characteristics named (developing intellectual skills and talents), they do not merit the title enrichment.

Enrichment, according to DeHaan (1957), is the process of tailoring the curriculum to the needs, interests and abilities of superior students, and of adding more variety and complexity to their assignments. Enrichment requires a learning environment conducive to exploration and originality (Wallen, 1972). An enriched educational program for high reading achievers is based on the recognition of individual differences and is planned to meet individual needs and to challenge abilities. Enrichment emphasizes quality rather than quantity, and adds depth and scope to learning experiences.

Objectives of reading enrichment. The primary objective of reading enrichment is to optimally develop each pupil's potential. Enrichment provides for the development of those reading skills which will aid the child most in his other learning; i.e., teach the child to think critically, promote curiosity, and encourage originality (Gibbony, 1966).

Comprehension

Definition of comprehension. The use of the term "comprehension" to denote the obtaining of meaning through

reading first occurred in 1917, when William S. Gray used it in the Sixteenth Yearbook. Today, comprehension is defined in various ways. Strang (1965) defined comprehension as the ability to derive meaning from words in sentences, paragraphs, chapters, and larger units. According to Durr (1967), comprehension at the simplest level is a direct decoding of the author's statements. Macomber (1972) defined comprehension as the ability to decipher another's words from written language. It has been called meaning-getting in reading by Smith (1969), the understanding of directly stated facts by Fry (1972), and the complex process of bringing meaning to the printed page by Cleland (1965).

Importance of comprehension. Most reading experts agree that comprehension is a critical aspect of reading. According to Cleland (1965), comprehension is the main consideration in reading. Smith (1969) called comprehension the very heart of the reading act, while Goodman (1971) believed that the ultimate and immediate goal of reading is comprehension. Kerfoot (1965) felt that reading comprehension is one of the most important areas in reading instruction. Fry (1972) stated that improving comprehension is the most difficult and most important part of teaching reading.

Sub-components of comprehension. Working models

of the comprehension process are not yet available. Many reading experts have presented analyses of the processes and skills thought to be involved in comprehension, but none have provided adequate empirical support. It is difficult to denote precisely the nature of comprehension. Commercial reading tests list numerous categories of comprehension which they purport to measure: word recognition, word analysis skills, ability to draw inferences from what is read, retention of details, ability to locate specific information, rate of reading, speed of comprehension, visual perception of words and letters, ability to determine the intent of the writer, ability to select the main thought of a passage, etc.

There have been many attempts to specify more narrowly the components of comprehension. Probably the best known is the 1941 study done by Davis (1971). Davis sought to identify some of the fundamental factors in reading comprehension, and to provide a means of measuring them. On the basis of a comprehensive survey of the literature, he listed nine categories of basic skills of reading comprehension:

1. Word knowledge, as measured by recognition vocabulary items.
2. Ability to select the appropriate meaning for a word or phrase in the light of its particular contextual setting.
3. Ability to follow the organization of a passage and to identify antecedents and find references in the passage.

4. Ability to select the main thought of a passage.
5. Ability to answer questions which are answered directly in the passage.
6. Ability to answer questions which are answered in the passage but not in the words in which the question is asked.
7. Ability to draw inferences from the passage about the content of the passage.
8. Ability to recognize the literary devices used in a passage and to apprehend its tone and mood.
9. Ability to determine the writer's purpose, intent, and point of view; i.e., to draw inferences about the author [p. 8-39].

He then developed test questions to measure each of these skills, administered the test to a group of adult readers, and computed the inter-correlations among the nine tests, with six significant factors emerging:

1. Word knowledge.
2. Ability to manipulate ideas and concepts in relation to one another (reasoning in reading).
3. Ability to grasp the author's expressed ideas.
4. Ability to identify the writer's intent or purpose.
5. Ability to follow the organization of a passage.
6. Knowledge of literary devices and techniques [p. 331].

Word knowledge accounted for the greatest part of the variance, followed by reasoning in reading and literal meaning. Lennon (1962) noted that the numerous reading skills to which separate names have been attached are so closely related as to be almost identical, and that most of the measurable variance in tests of reading comprehension can be accounted for in terms of Davis' six factors. Hunt (1957) conducted a differential item analysis of these six skills. Special effort was made to select items for each of the six skills which would be relatively like

those within an item group and relatively different from those in the other item groups. A random sampling of 370 adult readers was used to obtain the difficulty and discrimination indices for the items within each skill. The results supported the existence of six distinct factors of reading comprehension.

On the basis of Davis' study, and the many similar investigations, Lennon (1962) concluded that four general components of reading ability may be identified and measured:

1. A general verbal factor - vocabulary
2. Comprehension of explicitly stated material
   a) locating specifically stated information
   b) comprehension of literal meaning
   c) ability to follow specific directions set forth in what is read
3. Comprehension of implicit meanings
   a) ability to draw inferences from what is read
   b) ability to predict outcomes
   c) ability to derive meanings of words from context
   d) ability to perceive the main idea
   e) ability to derive some generalizing principle from it
4. Appreciation [p. 336].

McCullough (1957a), in a study done with primary-age children, attempted to determine the validity of measuring the sub-components of comprehension. She found a positive relationship among four types of comprehension: main idea, details, sequence and creative reading, with a common factor being the reader's fact-getting ability. The reader's abilities to obtain facts and main ideas are related to the extent that both are based on the same

general ability, but this relationship dissolves as the reader must go beyond the facts to summarize for the main idea.

It becomes apparent that if reading abilities are substantially related and overlap to the extent that the various studies indicate, then efforts devoted to improving one or another skill will carry over to improvements in the other skills.

Rationale for Programs Designed to Increase Comprehension in the Primary Grades

A major misconception currently held by reading teachers is that training in critical reading skills should be delayed beyond the primary grades. Commercial publishers are only now beginning to offer comprehension series below the fourth-grade level. Primary-grade children, however, are capable of making judgments concerning abstractions within the range of their actual or vicarious experiences (Jenkinson, 1965). The understanding of children can be broadened by exposure to situations which demand that they extend their concepts. A constant check on the accuracy of a child's understanding and an increasing awareness of the function of words is important. Pratt (1966), in endeavoring to explain how the thinking process is involved when the primary-grade child tries to construct the meaning of what he reads, viewed the thought

process as a progression from conception to insight to understanding. The thoughtful reader conceives ideas inherent in the author's presentation, gains insight by bringing his own experience into interaction with what he believes the author is suggesting, and achieves understanding by extracting the essence of the author's expression and his own experience.

According to Jenkinson (1965), critical reading does not develop naturally, but can be developed as early as first grade by considering three main facets: understanding the range of verbal comprehension development of which primary-grade children are capable, cultivating creative questions from both teacher and reader, and providing a variety of opportunities for the expression of critical reaction. She presented a hierarchical model ranging from the simpler aspects of comprehension to the more complex: recognition of detail, sequence of events, understanding of word meanings, identification of things mentioned frequently, questions which will allow the child to say what he has read, queries as to the truth or reasonableness of what he has read, anticipating outcomes, drawing simple conclusions and making inferences, perception of tone and mood, and comparison of what is read with the child's own experience.

Artley (1965), like Jenkinson, accepted the

premise that critical reading skills should be taught within the primary grades. He believed that young children can examine reading materials critically in order to arrive at judgments, solutions, and conclusions. It is within the teacher's province to present the types of questions which will evoke analysis of the problem situation, evaluative responses, and variant solutions.

Russell (1961) stressed that the evaluation of a reading program in the primary grades should be concerned with the integration of reading with thinking. A child may learn to recognize words and to answer literal comprehension questions, but he is educated only when he has learned to think. The acquisition of thinking skills is being stressed today by educators in all fields. The true fundamentals of meaningful reading are concepts, linguistic ability and the use of the thinking process. Teachers should be providing practice to develop thinking skills higher than those involved in memorization. Questions stimulating productive thought will make children think as they read (Smith, 1969). This can be achieved with three very simple sentences advocated by Cutter (1966):

> Read the lines--What did he say?
> Read between the lines--What did he mean?
> Read beyond the lines--What may I infer? [p. 68].

Attempts to Increase Comprehension in the Primary Grades

A review of the literature indicates that while there have been many enrichment programs undertaken at the primary level, only a few of them have been concerned with increasing comprehension. Mattleman (1966) conducted an investigation of the effects of an enrichment program on first-grade children. She concluded that enrichment did not produce greater growth in IQ, word knowledge, or word discrimination skills, but that reading ability was significantly affected by mental ability, program, and the interaction of both. Conen (1966) studied the effect of a special program in literature on the vocabulary and reading achievement of second-grade children. Her conclusions were that oral language correlates with reading, and that both can be significantly improved by regular exposure to stories read aloud. Ames (1965) investigated the manner in which readers determine word meaning through the use of verbal context. Her conclusions were that the ability to comprehend, a rich background of experience, and a functional knowledge of linguistics all appear to be significant factors for successful use of verbal context to derive meanings. Yowaiski (1957) attempted to determine the effectiveness of a supplementary reading program as an aid in improving comprehension skills of a second-grade population. She applied techniques of conversation,

discussion, instruction, explanation, reports, story telling, and dramatization. Her results showed that the program was effective in improving the comprehension skills of her pupils. Indisano (1963) evaluated a word analysis program for grade 2, finding that reading and spelling achievement showed a statistically significant increase in favor of the experimental group due to a planned program in word analysis. A three-year study of the effectiveness of a program of reading comprehension, undertaken by Heck (1957), concluded that planned instructional programming in reading comprehension was effective. Bent (1969) grouped high reading achievers in elementary grades in special classes, reduced the amount of time spent on regular curricular activity, added enrichment activity, and found that the skills in critical thinking increased. He also found that the experimentals surpassed the control groups on academic achievement tests. Fried (1964) attempted to determine the effect of an enrichment program on the comprehension of a fifth-grade population. She concluded that the enriched group made substantially greater gains than the comparison group. The teachers involved noted an improvement in behavior and in voluntary reading.

Summary

While various points of view as to what constitutes reading enrichment have been presented, this study will reflect a view of enrichment that incorporates the opinions of Brown (1956), Gibbony (1966), Hill (1969), and Wallen (1972).

This view maintains that an enriched educational program for high reading achievers at the primary level should develop each student's potential by meeting individual needs and challenging their abilities. This may be accomplished by adding materials or experiences to the curriculum, other than those offered to the average student, which will develop the ability to reason logically and teach the child to think critically.

Although there is general agreement that enrichment is advantageous to high reading achievers, there has been little investigation as to whether an enrichment program will increase the comprehension of students at the second- and third-grade level. This study will focus on whether such a program will result in an increase in comprehension, as measured by the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W.

CHAPTER III

PROCEDURE

Overview

To determine whether the better readers at the second- and third-grade level can increase their reading comprehension with instruction given in a reading enrichment program, students involved in the study were randomly assigned to either an experimental enrichment group or to a control group. The names of the children in the top reading groups of each class were listed, by class, and then assigned numbers from 1 to 64. Using the table of random numbers on page 369 of Conducting Educational Research (Tuckman, 1972), half of the subjects were assigned to the experimental group, and half were assigned to the control group.

Both groups were pretested on the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W, and then were administered the Otis-Lennon Mental Ability Test, Elementary I Level, Form J, to establish their IQ level.

The tests were given by this investigator in a small room within the school that was assigned for the

reading enrichment program. Subjects were tested in groups of eight, since the space limitations of this room made this a workable number. The groups were taken from the classrooms on an alternating basis so as not to disrupt the ongoing classes. The groups of eight, therefore, included both the experimental and control subjects. The two parts of the Stanford Achievement Test were administered on two consecutive days to groups of eight subjects each. The Word Meaning subtest, which has a time limit of 12 minutes, was administered on the first day, and the Paragraph Meaning subtest, which has a time limit of 30 minutes, was administered on the second day. The Otis-Lennon Mental Ability Test must be given in two sittings scheduled on the same day. It is recommended in the manual that the first sitting be administered in the morning, and the second sitting in the afternoon. The morning sitting took approximately 40 minutes, and the afternoon sitting approximately 20 minutes, including the time necessary to distribute the materials and give directions.

The experimental group worked in their respective classrooms, under the supervision of the classroom teachers, in their regular reading program, Keys to Reading, 1972 (T. L. Harris, M. Creekmore, M. Greenman, & H. Allen [Indianapolis, Ind.: The Economy Co., 1972]). They were given the reading enrichment program as an adjunct to the

classroom program. Twice each week, for periods of 45-minute duration, these children left the classroom during the scheduled reading period, and came to the small classroom in the building where this investigator conducted the reading enrichment classes in groups of eight. This time was taken from their regular reading program, so that they did not have additional reading instruction time.

The control group worked in their respective classrooms on the same regular reading program, but were not given the reading enrichment program.

At the end of a 16-week period, both groups were again administered the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery. The reading comprehension scores of the two groups were then compared.

This chapter describes the population used in the study, the nature of the experimental reading enrichment program, and the tests employed as pretest and posttest measures.

Subjects

Subjects were students in the top reading groups of three second-grade and four third-grade classrooms in Frost School, a 1-6 school located in East Brunswick, New Jersey. East Brunswick is an upper-middle-class suburban community with a population of 31,740, and a median income

in the Frost school area of $13,229. The major occupations, according to the 1970 Census of the Population, are white collar, professional, managerial, and teaching. Minority population in the community is less than one-half of 1%, and there were no minority group children in the classes involved in the study.

The total population used in the study was 64 pupils. The experimental group consisted of four subgroups of eight children each, two second-grade subgroups and two third-grade subgroups. Of these 32 pupils, 17 were girls and 15 were boys. Of the 32 pupils in the control group (16 each from the second and third grade), 22 were girls and 10 were boys. Ages and IQ characteristics of these groups are presented in Table 1.

The Reading Enrichment Program

McGraw-Hill Book Company's new set of practice readers, Reading for Concepts, edited by William Liddle (1970), was chosen as the basic series for the enrichment program. This is a series of eight readers containing stories of approximately 250 words each. They are written around a variety of ideas, drawn from the sciences and social sciences, that would appeal to a child's imagination and curiosity. This reading series is founded on a conceptualized base. Content is prepared in small increments so that it can be readily absorbed by young readers,

TABLE 1

AGE AND IQ CHARACTERISTICS OF EXPERIMENTAL AND CONTROL GROUPS

	Age range (months)	Mean age (months)	Standard deviation (months)	IQ range	Mean IQ	Standard deviation
Second grade						
Experimental	86-95	9.0	2.7	102-131	119.3	8.50
Control	85-97	9.1	3.7	97-134	115.3	11.63
Third grade						
Experimental	98-114	10.4	4.3	94-136	119.6	9.87
Control	96-109	10.2	3.7	98-138	121.4	10.84

adhering to Bruner's (1960) concept that children can learn extremely sophisticated concepts if these are presented at their level. The content of the basic articles is factual, thus providing an opportunity for interested readers to explore a wide variety of ideas while they are practicing specific reading skills. Each practice exercise contains a vocabulary list, and is followed by a test designed to develop a range of thinking skills in a carefully organized sequence of comprehension skill development. The skills tested are those suggested in Bloom's Taxonomy of Educational Objectives (1956), which are consistent with the categories of basic skills listed by Davis, as discussed in Chapter II. The test questions are designed to order thinking in the following skills:

Factual detail

Recognition of meaning of word in context

Antecedent

Inference or implication

Substantiations from context

Recognition of the main idea of the story

Meaning of the opposite word

Recognition of word in context

There are charts at the end of each book on which to record the scores of each skill tested. By carefully using these charts, the teacher and pupil can diagnose

skill weaknesses, and keep track of progress in each specific skill aspect.

The readers are organized by difficulty levels. The second-grade children used Book A--Some Changes Are Fast, Some Changes Are Slow. The third-grade children used Book B--We Learn from the Past. One story was presented for each lesson.

Additional work in Thirty Lessons in Outlining (P. Furbush, E. Ross, & D. Durrell [Wellesley, Mass.: Curriculum Associates, 1971]) was presented as time permitted to teach the skills of classification and sequence, since these are not covered in Reading for Concepts. For a change of pace, teacher-made word games such as flash cards with multisyllabic words, word search puzzles, crossword puzzles, acrostics, anagrams, and word bingo were added to the lessons as time permitted.

Test Instruments

The Stanford Achievement Test. The Stanford Achievement Test, Primary II Battery, Form W, in Word Meaning and Paragraph Meaning, was used in this study. This test is a group test which is regularly used within the East Brunswick school district. The Primary II level is administered to grades 2.5-3.9.

Traxler (Buros, 1972) stated that the current edition (1966) of this test represents an improvement over

the 1953 and earlier editions, in that nearly all the reading materials and test items are new and take account of modern changes in the theory and practice of reading instruction and of improvements in techniques of testing. The task of filling in each blank in the Paragraph Meaning subtest is objectified by having the pupil choose from four suggested responses. More attention than formerly is given to including, in the overall score, such reading skills as getting the central thought, drawing conclusions, and recognizing feelings. The current edition has three published forms: W, X, and Y. Reliabilities of the scores on the Stanford Reading tests are high enough to warrant their use in appraising the reading ability of individual pupils. The national standardization compares favorably with that of any other achievement test. Hobson (Buros, 1972) maintained that the Stanford tests have three basic advantages over competing tests:

1. The earliest start in the field.
2. Authorship of unparalleled distinction.
3. The first really adequate job of standardization.

These assets have resulted in the general acceptance of these tests.

The Otis-Lennon Mental Ability Test. The Otis-Lennon Mental Ability Test, Elementary I Level, Form J,

was used in this study. This is a non-reading group IQ test which may be administered to grades 1.6-3.9. Milholland (Buros, 1972) maintained that the construction and norming of this test adheres to the highest level of current standards. Sophisticated authorship, apparently backed by the publisher's determination to spare no effort, has resulted in a product of exceptional merit. Scores may be expressed as deviation IQ's and as age and grade percentile ranks and stanines. Validity research was wide-ranging, and abundant data were provided. The test correlates adequately with educational criteria and with other measures of general scholastic aptitude. Estimates of reliability using alternate forms and split-half techniques give the user assurance that the results can be used with reasonable confidence. Grutelueschen (Buros, 1972) was impressed with the way the test booklets were organized and designed and the ease with which the test was administered and scored. It was his opinion that the manual contained an excellent discussion of the use of the age and grade norms and the interpretation of test scores. He felt that substantial evidence was provided to indicate that the Otis-Lennon was highly reliable and that it was an outstanding test of its kind.

Administration of Tests

At the outset of the study, in early October of

1973, the Stanford Achievement Test, Primary II Battery, Form W, in Word Meaning and Paragraph Meaning, was administered (by this investigator) to all subjects in both the experimental and control groups. The tests were given in a small room within the school that was assigned for the reading enrichment program. Subjects were tested in groups of eight, since the space limitations made this a workable number. The groups were taken from the classroom on an alternating basis so as not to disrupt the ongoing classes. The two parts of this test were given on two consecutive days in the manner suggested by the manual. The Word Meaning subtest, which has a time limit of 12 minutes, was administered on the first day. The Paragraph Meaning subtest, which has a time limit of 30 minutes, was given on the second day. All manual instructions were followed, and these scores were established as the pretest scores.

In order to establish that the children in both the experimental and control groups were of comparable intellectual ability, all subjects in both groups were administered the Otis-Lennon M ıtal Ability Test, Elementary I Level, Form J, in early November of 1973. The tests were given by this investigator in the room used for the reading enrichment program. Subjects were tested in groups of eight, as described for the Stanford Achievement

tests. Following the instructions in the manual, the test was given in a morning and afternoon session on the same day. The morning session consisted of Part I, with a time limit of 10 minutes, and Part II, with a time limit of 12 minutes. The afternoon session consisted of Part III, in which the examiner read the direction for each item orally. Part III of the test took approximately 20 minutes.

In early February of 1974, all subjects were again administered the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W, in the same manner and under the same conditions as the previous October. These scores were established as the posttest scores.

Copies of the tests may be found in Appendixes A and B. All test score information may be found in Appendix C.

Experimental Design

The experimental design used was a pretest-posttest control group design as illustrated below:

$$\begin{array}{cccc} R & O_1 & X & O_2 \\ R & O_3 & & O_4 \end{array}$$

Comparisons were between the experimental group, using the reading enrichment program in addition to the regular

classroom program, and the control group, using the regular classroom reading program only. Pretest measures were scores on the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W, administered in early October of 1973. Posttest measures were scores on these same tests administered in early February of 1974. The experimental treatment was the reading enrichment program.

Statistical Analysis

Tests were hand scored by this investigator and coded. Coded test scores were key punched onto IBM cards and verified. The data were then analyzed by an analysis of covariance using the General Linear Hypothesis BMD 10V, with IQ and pretest scores as covariates and posttest scores as the dependent variable.

CHAPTER IV

RESULTS AND DISCUSSION

Results

Data were analyzed by an analysis of covariance using the General Linear Hypothesis BMD 10V, with IQ and the pretest scores of the Stanford Achievement Test as the covariates, and the posttest scores of the Stanford Achievement Test as the dependent variable. Analysis of covariance was used to control statistically for the possible effect of initial level of performance in the criterion measure (i.e., pretest scores).

The first hypothesis of the study was that there would be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, in Word Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading program, as compared with the posttest scores on this same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program. A summary of the analysis of covariance of Word Meaning scores is presented in Table 2. Inspection of this table

indicates that the effect of the enrichment program on Word Meaning scores was not significant. Therefore, the first hypothesis of the study was not confirmed.

Mean Word Meaning scores are reported in Table 3. Inspection of pretest, posttest, and adjusted mean scores shows a uniform pattern of improvement for all subjects irrespective of grade or type of program.

The second hypothesis of this study was that there would be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, in Paragraph Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading program, as compared with the posttest scores on this same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program. A summary of the analysis of covariance of Paragraph Meaning scores is presented in Table 4.

Table 4 reveals a significant main effect for grade level and program for Paragraph Meaning scores. Inspection of mean scores in Table 5 shows that the adjusted mean score was significantly higher for the experimental group than for the control group for both the second and third grade. The adjusted mean Paragraph Meaning score for the second-grade experimental group was

TABLE 2

SUMMARY OF ANALYSIS OF COVARIANCE--WORD MEANING

Source	df	Mean square	F	P
Grade level	1	3.19	<1	NS*
Enrichment program	1	6.13	1.92	NS*
Grade level and enrichment program	1	0.06	<1	NS*
IQ	1	46.66	14.62	<.05
Pretest	1	299.05	93.69	<.05
IQ and pretest	2	260.28	81.55	<.05
Error	58	3.19		

*NS = not significant.

TABLE 3

ADJUSTED MEANS[a] REPORTED FOR WORD MEANING TAKING COVARIATES[b] INTO EFFECT

	N	Pretest mean scores	Mean IQ	Post-test mean scores	Mean dif. between pretest & posttest scores	Adjusted mean scores
Second grade--experimental	16	23.56	119	27.00	+3.44	28.20
Second grade--control	16	21.60	115	24.87	+3.27	27.64
Third grade--experimental	16	28.06	120	30.43	+2.37	28.83
Third grade--control	16	29.00	121	30.50	+1.50	28.15

[a]Scores reported as raw scores.

[b]Covariates are IQ and pretest scores.

TABLE 4

SUMMARY OF ANALYSIS OF COVARIANCE--PARAGRAPH MEANING

Source	df	Mean square	F	P
Grade level	1	173.17	9.27	<.05
Enrichment program	1	111.87	5.99	<.05
Grade level and enrichment program	1	7.92	<1	NS*
IQ	1	192.42	10.30	<.05
Pretest	1	646.76	34.62	<.05
IQ and pretest	2	743.89	39.82	<.05
Error	58	18.68		

*NS = not significant.

45.72 as compared with an adjusted mean score of 42.33 for the second-grade control group. Similarly, third-grade subjects in the experimental group had a higher adjusted mean Paragraph Meaning score than did the third-grade subjects in the control group, the respective adjusted means being 48.85 and 46.91. Therefore, the second hypothesis of the study was confirmed: children who participated in the reading enrichment program had significantly greater gains in Paragraph Meaning scores than did the children in the control groups who did not have the benefit of the program.

Further analysis of results other than those directly related to the two hypotheses of the study showed a differential effect of grade placement on reading performance. Whereas there was a significant main effect for grade level on Paragraph Meaning scores, this did not occur for Word Meaning scores (Tables 2 and 4). Inspection of Table 5 indicates, as would be expected, that third-graders in both the experimental and control groups had significantly greater adjusted mean Paragraph Meaning scores than did the second-graders in those groups, with third-graders in the enrichment program having the highest adjusted mean score of all four groups. The significant main and interaction effects found for IQ and pretest scores on both Word Meaning and Paragraph Meaning confirms

TABLE 5

ADJUSTED MEANS[a] FOR PARAGRAPH MEANING TAKING COVARIATES[b] INTO EFFECT

	N	Pretest mean scores	Mean IQ	Post-test mean scores	Mean dif. between pretest & posttest scores	Adjusted mean scores
Second grade--experimental	16	40.30	119	45.06	+4.76	45.72
Second grade--control	16	34.80	115	38.06	+3.26	42.33
Third grade--experimental	16	45.06	120	50.68	+5.62	48.85
Third grade--control	16	46.80	121	50.00	+3.20	46.91

[a]Scores reported as raw scores.

[b]Covariates are IQ and pretest scores.

the advisability of utilizing these scores as covariates in the analysis of the results.

Copies of the test instruments used in this study may be found in Appendixes A and B. Test scores of subjects in the experimental group are listed in Appendix C, while test scores for subjects in the control group are listed in Appendix D.

Discussion

Results of this study indicate that a program of reading enrichment can significantly improve reading comprehension of better readers in the second and third grade.

Children who were given the reading enrichment program as an adjunct to their regular classroom reading program showed significantly greater improvement in Paragraph Meaning scores as measured by the Stanford Achievement Test, Primary II Battery, Form W, than the children who were given the same classroom reading program, but not the enrichment program.

It is noteworthy that this result was obtained in the course of just a 16-week instruction period, involving only one and one-half hours per week. It is conceivable that even greater gains would have occurred had the enrichment program been of longer duration, involved more instructional time, or both. In the actual school

situation, children would be exposed to the enrichment program throughout the entire school year, or possibly longer. The use of such a program, as described in this study, could bring about a higher degree of comprehension skill development than is typically achieved in a conventional reading program at these grade levels. Since this is a program which can be implemented within the school with a minimum of equipment and expense, it may represent a viable means for schools to address themselves to the special needs of better readers.

In addition to the statistically significant result discussed above, the reading enrichment program appeared to result in a number of important qualitative gains on the part of the students involved in it. According to their teachers, these students showed gains in self-confidence, developed a more mature approach to the handling of difficult work, and became willing and eager to master new materials. Many of these student's parents made favorable comments to this investigator concerning their children's enthusiasm about reading due to this program. Thus, for example, parents noted more frequent leisure time reading, greater interest in using the library, and, in general, a more positive attitude toward school.

In contrast to the effect of the reading enrichment program on Paragraph Meaning scores, no significant

effect was found for this program on Word Meaning scores. This may be due to the nature of the enrichment program, which was concerned primarily with the development of word meanings in context rather than in isolation. The reading enrichment program did not involve the memorization of vocabulary lists per se, but stressed the development of vocabulary as a means of understanding the passages and stories involved in the lessons. Paragraph Meaning appears to be a more stringent criterion of reading comprehension than is Word Meaning, since Paragraph Meaning involves a greater range of comprehension skills, such as those described by Davis (1971), and entails more varied reading tasks.

Although not directly related to the two hypotheses of this study, no significant difference was found between Word Meaning scores of second- and third-graders, irrespective of which group they were assigned to. In contrast, a significant effect for grade was found for Paragraph Meaning scores, third-graders performing better than second-graders on this measure. These findings raise the possibility that the development of overall comprehension ability on the part of second- and third-grade better readers is more a function of their application of words known rather than merely an increase in the number of words known per se.

CHAPTER V

SUMMARY AND CONCLUSIONS

This chapter summarizes the present study, draws conclusions from the research results, and suggests areas for further study.

Summary

This study was concerned with whether the better readers at the second- and third-grade level, given a reading enrichment program with emphasis on comprehension skills, would be able to increase their reading comprehension more than second- and third-grade better readers given the same classroom reading program but not the enrichment program.

The subjects were 64 pupils in three second-grade and four third-grade classrooms in a middle-class suburban community in central New Jersey. Subjects were assigned to experimental and control groups by a process of random selection to assure equivalence of the groups. The control group worked in their respective classrooms in the regular reading program under the supervision of the classroom teacher. The experimental group worked within their classrooms on the same reading program, but were

given the reading enrichment program as an adjunct to their classroom reading program. Twice each week, for periods of 45-minute duration, these children left their classroom during the regularly scheduled reading period, and came to another room in the building where this investigator conducted the reading enrichment classes. Thus, all pupils in both groups spent equal time in reading instruction.

At the beginning of the study, all subjects were administered the Otis-Lennon Mental Ability Test, Elementary I Level, Form J. Pretest data were obtained by administering the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W. At the end of 16 weeks, posttest data were obtained by administering these same two subtests. Results were subjected to an analysis of covariance with IQ and pretest scores as the covariates, and posttest scores as the dependent variable.

The following hypotheses were tested:

1. There will be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, Form W, in Word Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading program, as compared with the posttest scores on this

same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program.

2. There will be a statistically significant difference in the posttest scores of the Stanford Achievement Test, Primary II Battery, Form W, in Paragraph Meaning, for a group of second- and third-grade students given a reading enrichment program as an adjunct to their classroom reading program, as compared with the posttest scores on this same measure for a group of second- and third-grade students given the same classroom reading program but not the enrichment program.

Analysis of the results failed to support the first hypothesis, but did support the second hypothesis; i.e., the students in the reading enrichment program did show a significantly greater improvement in Paragraph Meaning scores than did those students who were not in the reading enrichment program.

Conclusions

Based on the findings of this study, and subject to the limitations of the size and nature of the population used, the following conclusions may be drawn:

1. The use of a reading enrichment program can significantly increase specific reading comprehension skills of better readers in the second and third grade.

The particular comprehension skills increased are a direct function of those skills emphasized in the reading enrichment program.

2. The use of a reading enrichment program with better readers of the second and third grade can indirectly affect, in a positive manner, qualities such as self-confidence, interest in reading, and general school satisfaction.

3. The use of a reading enrichment program appears to represent an economic vehicle for providing for the reading needs of children at the upper ability levels since it does not require an investment in expensive equipment or materials.

Suggestions for Further Study

1. In view of the relatively short duration of the reading enrichment program in the present study, it would be desirable to conduct a study to determine whether a greater increase in comprehension skill development could be achieved by extending the length of the program.

2. The nature of the gains in comprehension experienced by the experimental group of the present study, as discussed above, was related to particular skills stressed in the reading enrichment program. Consequently, a study should be undertaken utilizing enrichment programs systematically emphasizing varied comprehension skills to

determine those most readily subject to improvement.

3. The reading enrichment program in the present study was conducted outside of the regular classroom setting. A study should be designed to determine whether this program would be as effective if it were incorporated into the classroom curriculum, and was taught by the classroom teacher.

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APPENDIX C

TEST SCORES OF EXPERIMENTAL GROUP SUBJECTS

TEST SCORES OF EXPERIMENTAL GROUP SUBJECTS

Subject no.	Grade	IQ score	Word Meaning*		Paragraph Meaning*	
			Pre-test	Post-test	Pre-test	Post-test
1	2	102	20	25	37	45
2	2	110	23	25	39	39
3	2	122	29	32	49	51
4	2	127	24	27	43	44
5	2	127	26	29	39	45
6	2	116	25	24	43	45
7	2	124	28	32	49	51
8	2	113	26	33	47	47
9	2	111	20	23	34	40
10	2	128	16	23	31	41
11	2	124	19	24	28	41
12	2	131	24	29	45	55
13	2	113	24	26	52	47
14	2	118	24	28	32	44
15	2	113	22	21	35	40
16	2	130	27	31	42	46
17	3	127	33	34	56	55
18	3	114	25	27	31	48
19	3	111	32	33	55	58
20	3	119	31	33	45	53
21	3	114	27	29	37	48
22	3	116	31	33	48	54
23	3	125	31	32	40	52
24	3	94	23	24	37	40
25	3	136	23	28	42	47
26	3	125	30	31	50	57
27	3	118	25	30	37	42
28	3	125	33	32	52	56
29	3	118	26	30	45	47
30	3	114	23	31	41	48
31	3	125	27	29	55	56
32	3	133	29	31	50	50

*Raw scores.

APPENDIX D

TEST SCORES OF CONTROL GROUP SUBJECTS

TEST SCORES OF CONTROL GROUP SUBJECTS

Subject no.	Grade	IQ score	Word Meaning*		Paragraph Meaning*	
			Pre-test	Post-test	Pre-test	Post-test
1	2	108	26	27	45	52
2	2	134	29	32	45	48
3	2	112	23	26	34	38
4	2	113	10	20	28	31
5	2	119	24	27	41	46
6	2	120	23	25	36	40
7	2	133	30	32	46	49
8	2	98	19	20	20	30
9	2	126	23	25	38	49
10	2	121	23	25	39	43
11	2	97	19	24	32	29
12	2	118	21	26	29	40
13	2	111	23	23	33	20
14	2	106	18	21	30	32
15	2	128	17	26	27	39
16	2	101	18	19	34	23
17	3	138	29	28	45	50
18	3	123	30	31	47	56
19	3	127	33	35	56	56
20	3	112	32	31	42	50
21	3	120	26	30	52	53
22	3	117	29	30	45	49
23	3	134	29	32	52	50
24	3	116	30	31	47	52
25	3	98	19	21	28	36
26	3	105	25	25	38	39
27	3	120	30	32	44	52
28	3	130	26	31	49	52
29	3	136	29	31	55	53
30	3	119	31	33	47	50
31	3	120	33	32	50	49
32	3	128	33	35	52	53

*Raw scores.

A READING ENRICHMENT PROGRAM TO INCREASE COMPREHENSION OF SECOND- AND THIRD-GRADE STUDENTS

AN ABSTRACT OF A THESIS

SUBMITTED TO THE FACULTY

OF THE GRADUATE SCHOOL OF EDUCATION

OF

RUTGERS UNIVERSITY

THE STATE UNIVERSITY OF NEW JERSEY

BY

ELINOR FRENCH

IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE

OF

MASTER OF EDUCATION

COMMITTEE CHAIRPERSON: Stephen Strichart, Ph.D.

NEW BRUNSWICK, NEW JERSEY OCTOBER 1974

ABSTRACT

The present study was designed to investigate whether the comprehension skills of the better readers in the second and third grades could be significantly increased through the use of a reading enrichment program as an adjunct to their classroom reading program.

Subjects were 64 pupils in three second-grade and four third-grade classrooms in a middle-class suburban community in central New Jersey, randomly assigned to either an experimental or a control group. Subjects in the experimental group participated in the reading enrichment program conducted by this investigator. The program was conducted twice each week over a 16-week period, each 45-minute session replacing the regularly scheduled classroom reading instruction. Subjects in the control group received only regular classroom reading instructions. Thus, all pupils in both groups spent equal time in reading instruction.

The Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test, Primary II Battery, Form W, were used as the criterion measures for comprehension, with pretest and posttest measures being obtained. Analysis of the results indicated that the students in the reading enrichment program did not show significantly greater gains in Word Meaning scores, but did show

significantly greater gains in Paragraph Meaning scores.

Implications were raised concerning the feasibility of implementing a reading enrichment program with better readers in the second and third grade in order to meet their special reading needs. It was noted that the comprehension gains resulting from the reading enrichment program utilized in this study appeared to be related to the specific comprehension skills stressed in the program. Suggestions for further study were made regarding the relationship between the length of the enrichment program and the amount of comprehension gain, the identification of those comprehension skills most readily subject to improvement through the use of the reading enrichment program, and the effect of implementing a reading enrichment program within the regular classroom.

COURSE WORK FOR MASTER'S DEGREE IN READING

RUTGERS UNIVERSITY

		Instructor
Fall, 1970-71		
320:561	Foundations of Reading Instruction	Dr. Fry Dr. Mountain
Spring, 1971		
299:564	Remedial Reading	Dr. Fry
299:565	Laboratory in Remedial Reading	Dr. Kimberly
Summer, 1971		
610:581	Reading Materials for Children	Dr. Van Orden
Fall, 1971-72		
290:513	Introduction to Early and Middle Years of Childhood	Dr. Arnold
Spring, 1972		
290:501	Introduction to Educational Tests and Measurement	Dr. Geyer
Summer, 1972		
290:525	The Psychology of the Exceptional Child	Dr. Holowinsky
290:510	Social Psychology in the Classroom	Dr. Tuckman
Fall, 1972-73		
250:570	Elementary School Foundations I: Introduction to the Educative Process	Dr. Hillson

		Instructor
Spring, 1973		
250:571	Elementary School Foundations II: Integrative Analysis of Elementary Education	Dr. Hillson
Summer, 1973		
251:564	Social Studies in the Elementary School	Dr. Hyman
Fall, 1973-74		
299:566	Seminar in Reading Research and Supervision	Dr. Fry
Spring, 1974		
320:599	Master's Thesis Research	Dr. Strichart
250:674	Practicum in Elementary Education	Dr. Hillson
Summer, 1974		
250:547	Seminar in Elementary School Mathematics Education	Dr. Becker

Appendix A - The Stanford Achievement Test, Primary II Battery, Form W and Appendix B - The Otis-Lennon Mental Ability Test, Elementary I Level, Form J removed due to copyright restrictions.